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Albany Medical College

VOLUME XXXIII

'Ασφαλὲς καὶ ἔμπεδον ἐστω τὸ σὸν ἄδος. Ἐκ σκότου μὲν ἔξαγε
φάος, ἐκ δὲ πάθους ἀναψυχήν



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ALBANY MEDICAL ANNALS

Original Communications

PSYCHOTHERAPY IN ORGANIC DISEASE.

A paper read before the Third District Branch of the New York State Medical Society, October 3rd, 1911, at Kingston, N.Y.

By JAMES J. WALSH, M. D., Ph. D., Sc. D.,

Dean and Professor of The History of Medicine and of Nervous Diseases at Fordham University School of Medicine, New York.

Probably nothing is more interesting to the general practitioner at the present time than the manifestations of psychotherapy, that is, the cure of symptoms of disease by means of mental influence, in the life around us. All sorts of organizations have taken up the work of relieving patients' symptoms by means of changes in their mental state. We have various forms of New Thought, of vitalistic cults, of mental fads, of psychic experts and hypnotic pretenders, and then we have religious sects from Dowieism to Eddyism,—one hesitates to use the word Christian science for something that is neither Christian nor scientific,—all with many adherents. The most interesting feature of this phase of present day social life is the fact that people who have been suffering from all sorts of discomforts, most of them mental, it is true, yet many of them undoubtedly also physical or with some physical basis, are relieved by these mental treatments or persuasions and convictions that their sufferings are unreal or can be overcome by a change in their mental state.

Of course in spite of the name New Thought or New Psychology (always with a capital) and other such names attached to so many of these cults, they are not in any sense of the word new and even in our modern life have many interesting forbears. Up here in this part of New York state, the middle Hudson region, there are some interesting chapters about the middle of the nineteenth century in psychologic, magnetic and

other forms of mental treatment that were supposed to accomplish wonderful results. Recently, in reviewing the history of mental healing for the preliminary chapters of a book on psychotherapy, I learned much about some of these earlier predecessors of our modern psychologic healers. There was a special school of them at Poughkeepsie and one of their professors succeeded even in securing a hearing from the United States Senate because of the wonderful, new scientific powers that he had discovered and gained control over. It is always the cured cases that are appealed to and there were any number of cured cases so that Congressmen, save the mark! became persuaded that here was something to investigate and so the particular brand of psychologic medicine was given a hearing. Such men have as a rule a wonderful personal magnetism in their power to persuade people to their views. The only effect produced, of course, is through the mind and the influence that it can exert upon the body, but it is startling to note how many patients that have made the rounds of the regular practitioners of medicine are cured in this way.

Of course, in many cases there is no direct appeal to the mind but supposedly some physical means is used which produces the hoped for good effect. After a time, however, it transpires that the physical means used can have had no such influence for it is quite inefficient in the way claimed for it, yet somehow the good effects were observed. A typical illustration of this occurs in the work of Elisha Perkins, a Connecticut Yankee from Norwich, early in the nineteenth century, not long after Galvani's discovery of the fact that if two pieces of metal of different kinds in contact are made to touch an exposed nerve and muscle in a frog's leg the muscles twitch. There had been much discussion as to what the significance of this phenomenon was and Galvani thought that it was somehow associated with animal electricity. Perkins adopted this idea and proceeded to apply it in medicine. He took two pieces of metal about the thickness and length of lead pencils, but tapering towards one end and stroked people with them. Because of the stroking process he called them Tractors. It was not long before Perkins' Tractors began to work wonders. He did not succeed so well in this country, but made a great reputation in Europe, and then had wonderful success on his

return from abroad. He first went to Copenhagen, just why American doctors should go to Copenhagen to exploit their inventions and discoveries is not very clear, but like a later adventurer, Perkins, who was a full-fledged physician and had been expelled from his local medical society for quackery and advertising, had a great success.

He cured some of the nobility and then some members of Parliament. In this country one must get testimonials from judges and congressmen you know, and then everyone wanted to try this new and wonderful way of getting rid of the pains and aches of life. Anyone who had a painful joint or a feeling of discomfort anywhere just had that part of the body stroked by Dr. Perkins and proceeded to get better. After a time Perkins went over to England with letters of introduction from his cured patients and with his shrewd Yankee notion as to how to get on in the world made a success over there. He took out a patent on his Tractors and was cute enough to use the certificate of the patent office in such a way as to make it appear that the British government approved of his wonderful invention. The quacks and charlatans of the modern time could not give Perkins any points. He cured thousands of cases of chronic disease, especially the so-called cases of chronic rheumatism and made an immense amount of money. The reputation of his wonderful invention was after a time somewhat impaired by the fact that one English physician used a pair of wooden tractors, painted to resemble metal and got exactly the same results.

Perkins came back to America and did a great business for a time. He was over-confident, however. The issue really makes it somewhat doubtful whether he did not believe in his own invention. Philadelphia was having one of its serious epidemics of cholera which were so common and so fatal in the early part of the nineteenth century. Perkins declared his tractors could not only cure the disease, but would prevent it. He went to Philadelphia, caught cholera and died. That was the end of tractorianism. Unfortunately—or fortunately—there was no disciple able to persuade people as the great master himself did.

One might think that surely after an experience of this kind England would be proof against any cure-all for the chronic

painful conditions of the so-called chronic rheumatism group for several generations at least. The very next generation, however, fell for St. John Long's Liniment just as their fathers had come down under the tractors. St. John Long rubbed a magic liniment of which he alone possessed the secret on the aching shoulders and knees and elbows and hips and backs of the English nobility and produced so many wonderful cures that Parliament finally bought his secret from him and published it to the world for the benefit of mankind. It was only an ordinary liniment and just as soon as the secret of its composition was known it ceased to work any magical cures.

Of course, in all these cases the effective therapeutic agent at work was surely not the tractors—though the liniment may have done some good—but was the expectant condition of mind of the patient aroused by the many cures that they had heard of. If other people got better through this remedy of course they must also and then they were persuaded to feel better, to eat better, to get out more in the air, to take more exercise and nature did the rest. There are so many people suffering from what was at the beginning a real physical ailment, but which afterwards is only a group of symptoms inveterated by their failure to exercise, eat and get air and sleep enough, that it is not hard to find improvement of symptoms just as soon as they can persuade themselves that they ought to be better. Anything that will arouse the interest of people beyond middle age to the notion that they can go out a little more than they have been for some time will always make them better. This is what makes it so difficult to keep legislatures from passing all sorts of freak medical practice bills so as to allow their favorite "paths" to ply their trade. Many of the older members are helped in their chronic pains and aches, by anything that arouses the interest and makes them feel that now they can get out more, for as a consequence they eat and sleep better and nature does the rest.

It is surprising indeed to what an extent the relief afforded in this way can go. We have had some striking examples recently in New York. Our court records show that a shoemaker was manufacturing wonderful "magic shoes," which were curing or at least bringing great relief to patients suffering from locomotor ataxia and other serious organic nervous diseases. The

yielding of the tissues of the joints so common in locomotor ataxia which permits of the leg being carried up to the shoulder in the "carry arms" position, also permits of great flattening of the arch. This makes serious mechanical difficulty in walking for these patients, complicated by great tiredness on exertion. These magic shoes simply corrected the falling of the arch, but in so doing lessened the tired feeling that so often comes in these patients and makes it so difficult for them to get around and as a consequence they were tempted to get out more, to see friends more and soon began to feel better. The unfortunate use of the term incurable in many of these organic nervous diseases makes the patient suffer much more in mind than is necessarily consequent on his pathological condition. Incurable for the physician means only that he can do nothing to restore the underlying condition to normal, though the patient may live on in comparative comfort for many years and die from intercurrent disease. Incurable for the patient means usually a progressive disease with surely a fatal termination not far off.

The maker of the magic shoes promised cure, provided some immediate relief, patients were encouraged to get around and have some diversion of mind, they slept better, ate better, had a much better appetite, enjoyed their food better and were less bothered by constipation. No wonder many of them thought they were cured or at least on the high road to recovery. We had another experience. A physician read a paper before our most prominent medical society in which he detailed reports of cases of various organic nervous diseases and especially tabes cured by applications to ulcers in their middle urethras. This is the portion of the urethra in which ulcers are very seldom, if ever, found, but he had discovered them. Many patients were very much improved. Evidently not because of any physical good done to the degenerative condition in their spinal cords, but because of the strong mental impression produced by a new method of treatment, a definite promise of cure, and then after a time the sight of other patients suffering from the same ailment who had been greatly relieved and who claimed that they were cured.

Evidently organic disease can be distinctly modified by mental influences. We can see it in affections that have no re-

lation to the nervous system itself, however, quite as strikingly as in nervous patients. Our experience of recent years in the treatment of prostatic enlargement is interesting in this regard.

You will recall that some years ago here in America we were curing prostatic enlargement, that is at least relieving the symptoms due to it, by the removal of the testicles. The theory was that this brought about an atrophy of the prostate and the actual occurrence of this atrophy seemed to have been proved by experiments on dogs. A number of patients were treated successfully for the time being at least. Then it was found that the removal of a single testicle seemed to accomplish the same purpose. As patients, in spite of their age, were loath to undergo such a mutilating operation as double castration, this was a decided improvement. Then came the announcement that section of the vas deferens would do just as much good. Successes were reported after all of these modes of operation. The amount of residual urine decreased very much, or in some cases disappeared entirely. Patients became capable of emptying their bladders unaided and a catheter life became unnecessary. After a time, however, we found that none of these operations probably had the slightest effect upon the size of the prostate. All that had been accomplished was to give the patient better control over his bladder during the weeks of rest before and after the operation and by the production upon his mind of a definite persuasion that now he ought to be able to empty his bladder without difficulty. I think that I do not exaggerate in saying that this is the explanation of what had happened in these cases.

We have illustrations in almost more striking form with regard to other physical ills. I have known a patient who suffered for some months from what was thought to be indigestion and then finally when examined proved to have a tumor in the gastric region. Cancer was diagnosed and an exploratory incision made, though the patient, of course, was told that an operation in the sense of an attempt to remove the cancerous growth was intended. It was found that conditions were unfavorable for radical operation and the patient was simply closed up. On recovery from the anaesthetic he was not told that his case was inoperable, but that now that an operation had been done he ought to be better. It was intended to break

quietly to him later just what the state of the case was, though there was some thought that probably that would not be necessary and the progress of the case would make the revelation to him. During his convalescence, his appetite returned, he began to take more interest in life, he lost the sense of discouragement that had marked the last few months and feeling that whatever discomfort he now felt could all be referred to the operation scar, he proceeded to gain in weight. During the course of six months he gained over thirty pounds in weight. Of course, he subsequently died of his cancer, but not without having been given many months of vigorous active life and a sense of well being that was eminently worth while. I believe that there are cases on record where patients have gained forty, fifty and even sixty pounds weight under similar circumstances. Here is a typical example of the influence of mind over body and its power to overcome even the depressing effect of the growth of a cancer in the system.

In the matter of certain of the major neuroses so-called, or constitutional diseases dependent on obscure organic lesions, there are some striking examples of mental influence. Graves Disease for instance can probably be influenced more by strong suggestion than by any remedies that we have. A new and marvelous remedy for it is usually discovered about once every two years, at least that is the story of my own twenty years of medicine. It seldom does much good except in the hands of its inventor and a few who are close to him and enthusiastic about it. We have had all sorts of things from iodine, to thyroid itself and serums of various kinds, as well as various operative procedures, and after a time they have proved inefficient, though at the beginning they always did patients good. These patients are eminently susceptible to suggestion. Even so serious a disease as pernicious anemia is probably more benefited by getting the patient into a favorable frame of mind than in any other way.

It is not for the special nervous diseases or those that have their seat in the mind, but for the thoroughly physical afflictions that psychotherapy needs to be used most. Organic disease is often quite amenable to treatment in this way and we are bound to use every helpful factor that we can. In tuberculosis the state of the patient's mind is all important. It has

been well said that tuberculosis takes only the quitters. A patient who faces the outlook bravely may very well live in spite of such ravages of the disease in the lungs as makes it hard to understand just how life can be continued. Our three greatest specialists in tuberculosis in this country were all given up as hopelessly affected by the disease in their earliest career, yet all have done fine work. In heart affections of all kinds, not alone the cardiac neuroses, but in organic heart affections, the patient's state of mind means more than any drug that we can give him. Drugs are helpful, but the background of encouragement or discouragement is all important. While the older physicians emphasize this, men like Broadbent and MacKenzie in the modern time insist on it just as much. In the constitutional diseases, diabetes, gout and as I suggested, pernicious anemia, the mental state is extremely important.

I have called attention often recently to the fact that not little of our heart therapeutics has in the past at least been based on mental influence. It is no common experience to have a physician tell at a medical society meeting of his administering digitalis to patients suffering from a bad break in compensation and have them show signs of decided favorable reaction after a few hours. There is no doubt that within a short time after even a severe heart case has been examined by a physician and reassured there is likely to be much betterment, though this can scarcely be attributed to the remedies, for digitalis does not act for at least twenty-four hours. A number of heart remedies such as the cactus preparations, the may apple preparations and even strophantus, have lost their reputations to a great extent in recent years. They obtained them because almost any remedy that is given a patient will seem to be followed by relief of heart symptoms on account of the brightening up of the patient from reassurance. We talk about people being disheartened, when they are discouraged, because of the influence that the depression of mind has on the heart. Indeed, it is probable that mental influences, favorable and unfavorable, have more effect upon the heart than the strongest drugs that we have. Certainly they have a more immediate effect upon it. They act to a large extent through the circulation. They either shut up or relax blood vessels all over the body and so hamper or relieve the heart's work.

It is for the deliberate use of psychotherapy then that I am making a plea, for there is no doubt it has been used indeliberately and unconsciously with wonderfully good effects. Of course I realize very well that physicians have always used it and that whenever a physician of any experience volunteers advice to the young man entering practice, he emphasizes for him the necessity of securing the confidence of his patients. From the very earliest times this has been true and the old Greek fathers of medicine were especially insistent on the place that the patient's disposition had in bringing relief of symptoms. Even during the Middle Ages, we find many testimonies to the thorough recognition of this principle as of the greatest importance in therapeutics. Avicenna, the great Arabian writer on medicine, declared that "it often happened that the presence of the physician did more good for the patient than all his remedies." This expression of Avicenna's was repeated by many of the distinguished physicians who taught at the medieval universities and whose important place in the history of medicine and above all of surgery we have only just come to realize. Henry De Mondeville, for instance, the great surgical teacher of the early fourteenth century at Paris, insisted that it was of the greatest possible importance not to permit patients to become discouraged or downcast, and he even suggested that a joker should be provided to visit the surgical patients who were depressed.

Even before this, in the twelfth century, at Salerno, the subject of the relation of the physician to the patient personally in order that a good effect might be produced on the patient's mind and his confidence secured was emphasized rather strongly. We have from this time a document written by a Salernitan professor which contains some amusingly naïve details in this regard. It is called "The Coming of a Physician to His Patient, or an Instruction for the physician Himself." It is usually ascribed to Archimathaeus. It gives a rather vivid picture of the medical customs of the time. "When the doctor enters the dwelling of his patient he should not appear haughty, nor covetous, but should greet with kindly modest demeanor those who are present, and then seating himself near the sick man accept the drink which is offered him and praise in a few words the beauty of the neighborhood, the situation of the

house and the well-known generosity of the family, if it should seem to him suitable to do so. The patient should be put at his ease before the examination begins and the pulse should be felt deliberately and carefully. The fingers should be kept on the pulse at least until the hundredth beat in order to judge its kind and character and the friends standing round will be all the more impressed because of the delay and the physician's words will be received with just that much more attention."

The old physician evidently realized very well how much influence on the patient's mind meant for the course of the disease. For instance, he recommends that the patient should be asked to confess and receive the sacraments of the church before the doctor sees him, for if mention is afterwards made of this matter, the patient may believe that this is because the doctor thinks that there is no hope for him. For the purpose of producing an effect upon the patient's mind, the old physician does not hesitate even to suggest the taking advantage of every possible source of information so as to seem to know all about the case. "On the way to see the sick person he (the physician) should question the messenger who has summoned him, upon the circumstances and the conditions of the illness of the patient; then, if not able to make any positive diagnosis after examining the pulse and the urine, he will at least excite the patient's astonishment by his accurate knowledge of the symptoms of the disease and thus win his confidence."

Physicians at all times have thus recognized the necessity for influence on patients' minds. The more that they have known of medicine as a science, the more emphatic has been their insistence on the necessity for mental influence as a therapeutic factor. In times of deterioration, for there are "downs" as well as "ups" in medical history, men have always depended much on specific drugs, on special forms of treatment and have been sure that that they were curing while the great masters of medicine have always felt that nature was effecting the cure, and they were only removing obstacles and favoring the course of nature and putting the patient under the best possible conditions to have nature run a favorable course. All of these men have always insisted on the confidence of the

patient in the physician and the place of the mental state in influencing the course of disease favorably.

Even more than the regular physicians, however, the irregulars have used this therapeutic factor, not always consciously perhaps, sometimes indeliberately, but anyone who knows the history of quackery knows that their cures, when they occur, depend on producing a favorable impression on the patient's mind. Usually there is some physical means employed to attract the patient's attention, but after a time we find that the physical means is quite useless, often harmful, yet the cures were obtained.

In our own times when we see around us the very interesting results of the influence of mind on body as exercised by the various schools of New Thought and Mental Healing, and the various classes of irregular practitioners who do many different kinds of stunts with their patients, none of which we know, however, are of serious therapeutic significance, but who yet are able to cure them or at least relieve many of their symptoms by securing diversion and occupation of mind, we must come to use psychotherapy even more than before. It is the very newest thing according to the new thoughters, it is the very oldest thing in therapeutics on earth, but then after all, we physicians are familiar with the fact that the very newest of the new is a first baby's first tooth, though babies have been having teeth from time immemorial and doubtless Cain's first tooth was not a bit newer than the first incisor of the latest scion of a new-rich family. As we look down the history of our therapeutics, the influence of the mind can readily be seen to have more influence than all our drugs. The suggestion that went with medicine often was more efficient than the remedy itself. Indeed, not infrequently the remedy proved afterwards to be rather harmful than helpful, yet its general effect was good because of the favorable mental influence that went with it.

What we need is to keep before us certain definite ideas with regard to the place and the power of mental influence. Patients must be aroused out of any discouragement in which they sink. Unfavorable suggestions must be removed. They must not be allowed to cherish certain forebodings with regard to the course of their disease nor to keep turning over in their minds dreads of developments that may come. In this matter

it is particularly important to get the confidence of patients because some of them will conceal their worst fears fearful lest the doctor should confirm them or that if they told them they might discover in his hesitancy some unwitting and unwilling confirmation. Curiously enough it is our physician patients who are most likely to see the worst side of things and who always seem to be ready to hope for the worst. To overcome this tendency in human nature, favorable impressions and suggestions must be deliberately and frequently dwelt on. Here once more physician patients are the hardest to deal with. Much can be done, however, with all classes of patients provided only they can be favorably impressed and made to look forward with hope.

Probably the most important form of favorable suggestion is that which comes from the relief of symptoms that have been giving discomfort to the patient. Very often these symptoms have nothing at all to do with the underlying disease, but are consequent upon such conditions as confinement to the house, loss of appetite, disturbance of digestion, lack of diversion and occupation of mind and the like. Relief of these symptoms, however, will often appear, to patients as indicating the physician's power to be of help to them. The quack takes advantage of this deliberately and usually quite successfully. He does so as a rule with deliberate deception. For this there is no need, but on the contrary the physician can be quite straightforward, yet by relieving secondary symptoms can produce very favorable effects upon his patient's minds with consequent releasing of energy for curative or alleviating purposes that would otherwise be locked up by discouragement and depression.

There has been general recognition of these psycho-therapeutic ideas for nervous affections, but little appreciation of their value in even serious organic diseases. Prof. Richet called attention not long since to the fact that the physician can seldom cure, can often relieve and can always comfort and console. This very bringing of consolation keeps patients from using up their natural forces through worry. The increase of resistive vitality which results is often extremely helpful. The psychotherapy of organic disease then, is a large and important field little tilled as yet but of great promise. I have only tried to give a few suggestions in it.

MODERN PROBLEMS OF INFANT FEEDING.

Read at the Tenth Annual Meeting of the New York State Nurses' Association held at Albany, N. Y., October 18 and 19, 1911.

BY HENRY L. K. SHAW, M. D.,

Clinical Professor on Diseases of Children, Albany Medical College.

This is the age of the baby. Not so very many years ago the late Professor Fiske of Harvard showed how much our present civilization owes to the helpless babe. Babyhood he claimed has made manhood what it is and has permitted him to rise superior to all the other animals. The maternal instinct and mother love is awakened and the protecting care and devotion of the father becomes a tremendous vital force with the advent of the baby.

In face of our responsibility to the infant what a commentary on our boasted twentieth century civilization is the high infant mortality. One out of every five deaths in the United States to-day is of a baby less than a year old. An expert statistician has computed that upwards of two million little lives have been lost in the first ten years of the twentieth century. Dr. L. Emmett Holt says that "prevention of excessive infant mortality is a social problem of the first magnitude. In comparison with it even the great problem of tuberculosis takes a second place if we are to estimate by the sacrifice of life involved in the two cases."

The business of being a baby says some one, should be classed as an extra-hazardous occupation. The vast number of deaths in the first year are the direct result of improper nourishment and nutrition very frequently caused by ignorance on the part of the mother or her advisors. The question of the child's nutrition therefore is one of the most important topics for the consideration of those who come into a close advisory relation with the mother.

Some babies thrive on mixtures which in others would produce serious if not fatal results. One who understands the principles of physiological feeding can successfully manage the dietary of any infant no matter what food or method is employed. In other words the success or failure of any system of feeding depends upon the manner in which it is applied rather than the method itself.

In order then to fully understand the underlying principles of nutrition it is necessary to have a well defined idea of the food constituents and their use and place in nutrition.

The elements of food are the same in the infant as in the adult, namely, fats, proteids, carbohydrates, mineral salts, and water.

Fats. The fats form the most important source of body heat. They also supply elements needed for the normal development of the nervous system. The fats increase the body weight and make the baby appear comely and healthy. The normal development and growth of the bones depend in great part on the proper assimilation of fat. The unused and unabsorbed fat serves to maintain a soft consistency of the feces and prevents constipation. This unused fat comprises normally about fifteen per cent of the dried substance of the stool. Breast milk contains from three to four per cent of fat. While fat is such an important and necessary element of food it must be remembered that in certain conditions a very small amount may do positive injury. The more recent investigators have shown the difficulties of fat digestion and assimilation in certain conditions. Little or no fat should be given to babies with acute stomach or intestinal disorders, with wasting and loss of weight and in all fevers.

Proteids. The proteid is the form of food in which nitrogen is supplied to the body. Nitrogen is an essential element in the growth of the body and it enters into the structure of every cell. All the tissues of the body are formed by cells or modifications of cells. An infant requires much more nitrogen in proportion to its weight than the adult as provision has to be made for building up new tissue. The ancient Greek physicians recognized this as the word "proteid" comes from a Greek word signifying "I take first place." The digestion of proteids while begun in the stomach is principally carried on in the intestines, so that disturbances of digestion due to proteids are attended by intestinal symptoms.

When the proteids in the food are deficient the muscles become soft and flabby and the child ceases to grow. Dentition is delayed and rickets may develop. Excess in proteids leads to colic, indigestion and constipation. The stools are green and contain hard, bean-like curds.

The chief proteids are casein and lactalbumin of milk, and egg albumin. There are also certain vegetable forms of proteids but they are less digestible than the animal proteids. The proteids of mother's milk are the most digestible.

Carbohydrates. The carbohydrates are of value for the production of heat and as a source of muscular energy. They are also capable of replacing the fat waste of the body. Milk sugar is the carbohydrate of both cow's milk and mother's milk, but its composition and amount are not identical in both milks. Before the milk sugar or lactose can be absorbed from the intestines it has to be converted by digestion into glucose. This same process takes place before cane sugar can be absorbed. When we add milk sugar to cow's milk, we are following nature, but a number of authorities strongly urge the use of cane or granulated sugar. Maltose or malt sugar is a form of sugar which is very often added to the infant's food and it certainly agrees with some babies better than milk or cane sugar.

Starch is another carbohydrate used in infant feeding. This is present in barley, wheat, oatmeal, arrow root, etc. It is converted into sugar by the action of a ferment, ptyalin, which is present in the saliva even in very young infants. The amyllopsin in the pancreatic juice and the maltase in the intestinal secretions convert the starch into sugar. Whatever kind of cereal used must be thoroughly boiled. Excess of carbohydrates produces fermentation in the intestines with resulting colic, flatulence, and offensive and frequent green, watery movements. For a time they may lead to a rapid decrease in weight, but this is not accompanied by a proportionate increase in strength.

Mineral Salts. These salts are essential for cell growth. The phosphates of lime and magnesia are most important for the proper growth of the bones. Sodium chloride is important as it aids in the solution of globulins in the blood and increases the secretion of hydrochloric acid. These salts are furnished in abundance in both cow's and mother's milk.

Water. The milk of all mammals contains from eighty-five to ninety per cent of water. It is essential to life and constitutes more than half of the entire body weight. It has been estimated that in proportion to its weight, the average infant requires about six times as much water as an adult. Water

assists in digestion and is of value as a solvent and dilutent of food substances and prevents constipation. It acts also as a solvent of salts for elimination by the kidneys and through the skin and it should be given freely when the secretion of urine is scanty. It is a good rule whenever an infant cries between its feedings to offer a drink of plain boiled water. If it cannot be taken by the mouth, it can be injected into the rectum every few hours. Some babies refuse to take water from a bottle and in this case it should be fed with a spoon.

The organs of digestion differ in many respects from those of the adult. There are no teeth. The saliva is present at birth but in very small quantities because there is no physiologic stimulus of chewing. It contains ptyalin even at the time of birth.

The stomach is situated more vertically. The fundus is relatively flat. The pylorus forms the lowest point when the stomach is empty. The capacity is small and at birth will hold about one and a half ounces. The capacity gradually increases on an average of an ounce a month. The secretions of the stomach have an important bearing on the feeding. Hydrochloric acid is present at birth. It combines with the casein of the milk and is not found free until one or two hours after feeding in the breast fed and two to three hours in artificially fed infants. A small amount of pepsin is secreted but the most important enzyme is rennin which curdles the milk. There is also a gastric lipase which splits neutral fat into fatty acids.

The intestines are relatively longer in the infant. Compared to the length of the body we find the ratio in the adult is 5:1 and in the infant 8:1. There are a number of intestinal enzymes which assist in the digestion of milk. Erepsin converts peptones into amino acids and lactase changes lactose into glucose. The pancreatic ferments are the same as in the adult.

When the milk reaches the stomach it contains a small amount of saliva which has an alkaline reaction. In a few moments it separates into a solid curd which remains in the stomach, and whey which passes through. The order of passage of the stomach contents into the duodenum is whey, which contains the sugar and salts in solution, casein, and fat.

The pyloric valve is controlled by a very delicate mechanism.

When the stomach contents are alkaline the pylorus closes tightly and opens only when the reaction becomes acid. Solid pieces of curd in the stomach will also close the pylorus.

The human body has been compared to a steam engine in that it converts the fuel fed into heat and energy. The value of food as fuel is estimated in terms of its best production. The unit used is the caloric, which is the amount of heat which will raise the temperature of a cubic centimeter of water through 1° C. The caloric value of fats, proteids and carbohydrates as generally adopted is as follows:

1 gramme fat.	9.3 calories
1 gramme proteid.	4.1 calories
1 gramme carbohydrate.	4.1 calories

It is important that these values be considered in the dietary. Scientists have found that a baby during the first few months of life requires 110 calories for each 2.2 pounds of weight, from the third to sixth month, 100 calories, from the sixth to the twelfth month, 90 calories. These figures gradually decrease as the child grows older. The caloric value of a liter of mother's milk is 780 while a liter of cow's milk yields but 680 calories.

An average four-months-old breast-fed baby weighing twelve pounds, takes about twenty-eight ounces of breast milk in twenty-four hours which is equal to about 650 calories. An artificially fed baby of the same weight on a percentage formula of fat three, proteid 1.5, sugar 6.5 and taking twenty-eight ounces receives only 470 calories, which is insufficient for proper growth and nourishment.

HUMAN MILK.

Human milk is the ideal infant's food and breast feeding is the only universal method of feeding infants. It is very important to have a thorough understanding of its composition, character and variations as upon it are based our rules for the preparation of foods used as substitutes when woman's milk cannot be obtained.

The human breast consists of numerous lobes which are subdivided into lobules. These lobules open into small ducts which unite and form fifteen to twenty larger tubules which terminate at the orifice of the nipple. The breasts undergo a remarkable

development from the outset of pregnancy. They become fuller and firmer and the nipples enlarge and darken in color. Toward the end of pregnancy the breasts contain a small amount of colostrum but the secretion of the milk proper does not take place until two to six days after the birth of the baby.

Colostrum. The early secretion of milk differs very decidedly from normal milk. It is yellowish in color, has a high specific gravity (1040-1060), is strongly alkaline in reaction and is not as sweet as the later milk. The most distinctive features are the so-called colostrum bodies. There are several shapes of colostrum bodies which are probably epithelial cells which have undergone fatty degeneration. These cells disappear from the milk in ten to fourteen days after birth. When they persist in the milk longer than this they are liable to disturb the baby's digestion. This occurs when the breasts are not entirely emptied or if nursing is discontinued for a day or so. The use of the breast-pump to completely empty the breast after nursing will cause the disappearance of these colostrum bodies.

Human milk is a variable fluid of no constant chemical analysis. Cautley rightly states that it varies in different women, on different days, at different times of the day, at different periods of each nursing and in the two glands. It is modified by diet, condition of health and by exercise, by menstruation, mental emotions, prolonged lactation and other causes. It resembles the milk of other animals in composition. The same food constituents are present, namely, fat, proteid, carbohydrates, salts, and water, but the proportions differ widely. Human milk can be defined as a true secretion of the mammary gland forming an emulsion of small fat droplets in which proteids, sugar, and salts are held in solution. The following table taken from Holt shows the composition of human milk.

	Normal Average. Per cent.	Variations compatible with Health.	Per cent.
Fat.	4.	3.	5.
Proteid.	1.50	6.	7.
Sugar.	7.	1.	2.25
Salts.	2.	.18	.25
Water.	87.3	89.82	85.50
	—	—	—
	100.	100.	100.

The fat is chiefly made up of three fatty acids, palmitine, stearine and oleine. The fat globules vary somewhat in size and may be termed large, medium, and small. The medium sized globules predominate.

The proteid is composed mainly of three albumins. Casein is a nucleo-albumin and is insoluble being held in suspension by the lime phosphate in the milk. Casein is precipitated into a soft curd by rennet and into fine, small curds by acids. Lactalbumin and lactglobulin are sero-albumins and are soluble. They are very readily absorbed in the intestine. Lactalbumin is more abundant in mother's milk than casein while in cow's milk there is three or four times as much casein as lactalbumin.

The sugar is lactose or milk sugar and is in solution. The amount is about seven per cent and it is not subject to as much variation as the other food elements.

Many conditions affect the composition of human milk. The onset of menstruation in a nursing woman may upset the baby for a day or two, but it is generally slight and does not warrant the withdrawal of the breast. The occurrence of pregnancy during lactation is an indication to stop nursing for the mother cannot continue the nursing without endangering her own health and that of the foetus. Caution is necessary in giving drugs to a nursing mother as they may act on the infant and also affect the secretion of milk in her breast.

The most frequent cause of disturbed lactation is mental or emotional disturbance. Worry or prolonged nervous strain may alter the milk so as to cause it to disagree with a baby who had previously thrived upon it. Fright, grief, passion or excitement may so affect the composition of the milk as to make the child acutely ill or it may cause complete suppression for a few hours or days.

The *diet of the nursing mother* is of great importance. The rigid diet excluding fruits, vegetables, etc., so often insisted upon by the laity more than by the physician is not justified by experimental investigation or by clinical results. The diet should be simple but generous in variety. Nearly all the common vegetables and oranges, grape fruit, and fruit in season may be allowed in moderation. Rich salads and highly seasoned indigestible foods should be avoided because they are liable to

disturb the mother's digestion. One cup of weak tea or coffee may be permitted but strong tea and coffee should be prohibited. A cup of thin corn meal gruel, cocoa, or malted milk should be taken in the mid-morning and at bedtime. Plenty of water should be taken. Malt liquors are not necessary and are only given in small quantities as an aid to digestion and a stimulus to appetite. Systematic daily exercise is a more important factor than the precise diet. Walking to the point of moderate fatigue often improves the digestibility of the milk.

A frequent cause of disturbed lactation is insufficient sleep. The mother who is wakened several times a night to care for and nurse her baby cannot have sufficient rest and her milk will suffer. Wherever possible the mother and baby should sleep in different rooms.

Care of the breasts. The breasts require careful attention in the last months of pregnancy. They should be gently massaged to increase the local circulation and to remove superfluous fat. The nipples should be regularly anointed with lanolin. If they are retracted or poorly developed they should be systematically drawn out from the breast with the finger and thumb. Anything which tends to cause pressure on the nipples must be avoided. The nipples should always be carefully washed with a weak boric acid solution or plain water before and after each nursing.

Nursing intervals. The infant should not be placed at the breast oftener than once every six hours during the first twenty-four hours: once every five hours on the second day: once every four hours on the third day and then on three-hour intervals. Frequent and prolonged tugging at the breast during the first few days when the secretion is scanty tends to make the nipples tender and sore. A few teaspoons of warm water or a five per cent solution of milk sugar can be given every two or three hours. If the milk is delayed beyond the third day, artificial feeding should be begun at regular intervals. Holt states that good habits of nursing and sleep are almost as easily formed as bad ones, provided one begins at the outset. A great deal of the wear and tear incident to the nursing period may be avoided if the child is trained to regular habits. Attention to the minor points often makes all the difference between successful and unsuccessful nursing.

Regular hours of nursing should be insisted upon. The custom in this country is to feed the baby too frequently. Babies should never be fed oftener than once every three hours unless they are premature or sick. The stomach is rarely empty until two and a half hours after feeding and fresh milk should not be given until the stomach is empty. An eminent German authority makes the statement that restlessness between feedings is the sign of a disturbance of digestion and indicates a prolongation rather than a shortening of the period between the feedings.

One night feeding, that is between the hours of 10 P. M. and 6 A. M. can be given for the first eight weeks. The night feeding should be dropped after the second month making six feedings in twenty-four hours. Four-hour intervals with five feedings in twenty-four hours should be inaugurated after the eighth month.

On no account should the child be allowed to sleep in the same bed with the mother or at her breast as the temptation to frequent nursing is too great.

Method of Nursing. The mother should lean a little forward while nursing her child so that the nipple points downward towards the child's mouth. The breast should be slightly raised and held so that its weight is kept from pressing on the baby's nose. The nipple can be withdrawn from time to time if the baby nurses too rapidly in order to prevent choking and allow it to breathe. One breast is sufficient for one nursing if the milk is abundant. If the baby does not seem satisfied both breasts can be used.

Signs of inadequate nursing. The body-weight gives us valuable information. When the baby does not gain or steadily loses weight it is generally a sign of insufficient food. Weighing the baby before and just after its nursing will give the amount of milk taken from the breast. When the quantity is deficient the baby at first seizes the nipple eagerly and sucks vigorously until the breast is emptied and then not being satisfied will cry and be very restless and uneasy. Indigestion occurs if the milk disagrees. This is the case if the mother's milk is too rich and the baby will vomit and be colicky, sleepless and generally uncomfortable. The stools as a rule are frequent, thin and green with mucus and lumps of undigested milk. At times there is a great deal of gas and the stools are sour and irritating.

This unsuccessful nursing may be due to the milk being deficient or over-rich in quality or insufficient in quantity or because the breast is not given at proper intervals. All this can be remedied by proper means and do not warrant the baby being deprived of its natural inheritance. Far too many infants are weaned on slight and easily remedied grounds. An analysis of the milk is of great importance so as to ascertain wherein the milk is deficient. This can be remedied by changing the diet and mode of life of the mother. The following table from Cautley shows how this may be accomplished:

The percentage of proteid is increased by:

- Increased frequency of nursing.
- Increased proteid in diet.
- Insufficient exercise.

The percentage of proteid is diminished by:

- Diminished frequency of suckling.
- Decreased proteid in diet.
- Increased exercise.

The percentage of fat is increased by:

- Increased proteid in diet.
- Malt extracts.

The percentage of fat is diminished by:

- Deficiency of proteid food in diet.
- Excess of fatty foods.
- Fasting.

The percentage of water is increased by:

- Increased fluid in diet.

The percentage of water is diminished by:

- Diminished fluid in diet.
- Saline cathartics.

The total quantity can be increased by:

- Ingestion of an increased amount of fluid.
- Improving the general health and nutrition.
- Galactagogues.
- Massage of breasts.
- Electricity of breasts.
- Frequent suckling.

The total quantity can be diminished by:

Reducing amount of fluids.

Saline cathartics.

Drugs such as belladonna, camphor and potassium iodide.

A breast pump or massage must be employed to obtain a sample for the physician to analyze. The whole of the nursing should be obtained if possible as the milk which comes first is watery and poor in fat while that obtained at the end is rich in fat and solids.

While the analysis of the milk is of value, yet we must be guided in a great measure by the condition of the baby.

Contra-indications for maternal nursing. There are certain conditions when it is unsafe for the mother to nurse her infant. Mental disorders, tuberculosis, advanced heart or kidney disease, puerperal fever and severe acute illness all render the mother unfit to nurse her babe. Local conditions in the breast such as malignant disease, poorly developed breasts, abscess, etc., render nursing inadvisable, while depressed and fissured nipples make it impossible.

Wet Nurse. When the mother is unable to nurse her infant or when the baby is premature, or suffering from some constitutional disorder the best substitute is the milk of some other woman. A good wet nurse must be healthy, free from syphilis and tuberculosis and her breasts should show evidence of good glandular development. Her own baby must be healthy. It is not necessary that her child be the same age as the child she is to nurse as there are only slight changes in the composition of the milk after the first month. There is no evidence that moral qualities can be transmitted through the milk. It sometimes happens that a woman who has had an abundant supply of milk for her own infant, has very little for another infant the first few days in her new surroundings. When she becomes accustomed to her new surroundings, and with tactful treatment the normal flow of milk will be re-established.

In the past when little or nothing was known of modifying cow's milk to meet the physiologic requirements of the infant the wet nurse was invaluable. At the present time, in view of our knowledge of scientific methods of cow's milk modification, the service of a wet nurse is advised only in exceptional cases.

Weaning. Weaning should take place at about the tenth month. Longer nursing than this drains the vitality of the mother and is harmful to the child. Weaning should always be done gradually when possible. One bottle a day may replace one of the nursings at first and in the course of a few days two bottles and so on until in a month or six weeks the breast has been withdrawn entirely.

A wise procedure and one recommended by many authorities is to start giving a nursing baby one bottle a day shortly after birth. This is always a great convenience to a nursing mother and has a tendency to improve her nursing capabilities. When this is done, gradual weaning is an easy matter. Weaning is very difficult in some cases and requires patience and perseverance. Some babies will take food from a spoon or a cup and refuse the bottle. Starvation may have to be resorted to until hunger forces the child to eat. It is best to start weaning the baby during cool weather.

Sudden weaning may be required on account of the condition of the mother or the refusal of the baby to take the bottle. The food should be given much weaker than the bottle. The food should be given much weaker than for an artificially fed child of the same age. Otherwise an acute attack of indigestion may follow. The strength of the food should be gradually increased as the child becomes accustomed to cow's milk.

Cow's MILK.

Cow's milk has been used for the artificial feeding of infants for countless ages and is the only milk available for general use. It furnishes us with all the required constituents yet they are not in the same proportions as in woman's milk and are not identical in composition.

The composition of cow's milk as given by Holt is as follows:

	Jerseys.	Holsteins.	Average per herd.
Fat.	5.61	3.46	4.
Sugar.	5.15	4.84	4.50
Proteid.	3.91	3.39	3.50
Salts. . . . .	.74	.74	.75
Water.	24.59	87.57	87.25
<hr/>	<hr/>	<hr/>	<hr/>
Total.	100.	100.	100.

The chief differences between cow's milk and woman's milk are:

The *reaction* of woman's milk is less acid. Woman's milk is practically *sterile*. The fatty acids which make up the *fat* differ in number and proportion. The *proteid* is over twice as much in amount in cow's milk and it is very different in character. The proportion of lactbumin to casein is as five is to four in mother's milk and as one is to three in cow's milk. The casein of cow's milk coagulates quickly into large tough curds by the action of rennet and acids while the curds in woman's milk are small, loose and flocculent. The difference in the percentage of *sugar* is considerable, cow's milk having four and one-half per cent and woman's milk seven per cent. It is lactose in solution in both milks but there is a difference in the chemical composition. The salts in cow's milk are about three times as abundant. This consists chiefly in a larger percentage of some of the lime salts.

The source of the milk supply, the condition of the cows and the cleanliness of the dairy are of vital importance. The belief that the milk of one cow is preferable to that from a mixed herd is widespread. This is erroneous as the milk from a large number of cows is more uniform in composition and less liable to sudden fluctuations and other changes.

The medical societies in many of our cities have adopted rules and requirements necessary for the production and distribution of a strictly sanitary milk. When these requirements are satisfactorily met the society gives their seal of approval and the milk can be sold as "Certified Milk."

Dipped milk should never be used for the baby. It is always a poor food for infants and is often positively dangerous. Bottled milk from a reliable dairy is generally produced under better conditions and is not as subject to danger from contamination.

Sterilization which consists of heating the milk to 212° and pasteurization where the milk is heated for twenty minutes at a temperature of about 160° F., are employed to destroy bacteria in the milk when the source of the milk supply is unknown or suspected especially during the summer months. Heating the milk changes the taste and chemical constituents. Boiled milk

is only with difficulty solidified by rennet. Infantile scurvy not infrequently results in babies fed exclusively on sterilized milk.

It is undoubtedly safer and saner to use milk for feeding infants which is so clean and fresh that it can be given in its raw state.

Dr. Jacobi recently said that he believed the greatest advance in infant feeding in recent years lay in the production and popular demand for clean milk.

It is impossible to so alter the constituents of cow's milk that they are identical with woman's milk. Numerous methods of "humanizing" cow's milk are advocated but all of them fall wide of the mark. Certain changes have to be made in the cow's milk before it can be used for feeding infants and these changes are known as the modification of cow's milk. What should be done in every case is to study the individual digestive capabilities of each infant and adapt the cow's milk to meet the conditions. The term adaptation of cow's milk is better than modification.

The earliest method of milk modification was dilution with water or some cereal decoction.

This changes the quantitative composition of the milk and reduces the percentage of proteid which was formerly considered essential but it also reduces the amount of fat, sugar and salts.

Cereal gruels made of barley, oatmeal, arrowroot, etc., are very generally used to dilute the milk. The proportion of barley water and milk varies with the age of the child. The small amount of starch in these cereal waters has a favorable effect on the casein curds by breaking them up into smaller and finer curds and thereby rendering the milk more digestible. We have shown that a very young infant can transform and digest a small amount of starch.

An advance on these methods was to replace the fat and sugar weakened by dilution so that the proportion would be similar to woman's milk. Experience soon proved that no single formula would serve in all cases and men like Rotch of Boston and Holt of New York devised methods of considering the separate elements of the milk and adapting them to the needs of any infant. This broadly speaking is termed the percentage method of

infant feeding and aims to give the fat, proteid and sugar in the proper proportions and combinations best suited to each individual baby.

A method widely used and indispensable in certain cases is to remove the casein by adding rennet and straining out the solidified portion. The resulting fluid is called whey. This can be fed to the infant plain or with the addition of cream, milk, or sugar.

The addition of alkalies such as bicarbonate of soda, syrup of lime, lime water in sufficient quantities, etc., neutralize the acid in the stomach and will retard or prevent the curdling of milk in the stomach. This relieves the stomach of digestive work and throws it all upon the intestines. This is taken advantage of in certain cases.

Peptonizing or predigesting the milk completely changes the character of the proteid. It will remain fluid in the stomach and is useful in cases of marasmus and digestive disturbances. The addition of citrate of soda will prevent curdling in the stomach.

Buttermilk is now in vogue in feeding babies. Here we find the casein precipitated in fine curds by the action of the lactic acid. The lactic acid bacilli seem to exert a beneficial influence on the intestinal bacteria.

There is no end to the number of methods of milk modification and manipulation or to the alleged infant foods so widely advertised and skillfully lauded. It is not the purpose of this paper however to go into the details of preparation.

The responsibility of the nurse is great but she should never add to it by assuming the choice of any particular method of feeding or proprietary food.

Correspondence

A MOST IMPORTANT DISCOVERY.

A large number of people have passed away in recent years—suddenly—and “heart failure” has been stated as the immediate cause.

The most of such cases were not known to have had any heart ailment previously to their sudden deaths, and had a physician chanced to be present, could not have saved life by any known method.

The writer of this has discovered a method by which any person with two serviceable hands can save life, and she deems her discovery one of the most important of the age, since heart-failure is no respecter of position or number of years lived, or time, or place. Some have been found dead in the street while walking, others in bed, others while at the table immediately after having partaken of ordinary food; and many who have coughed spasmodically after having suffered from pneumonia or consumption.

Many who have died from lung troubles and had passed the expectorating period, could have recovered but for the *spasmodic coughing*, when there was nothing more to raise, and the heart in an angry mood, so to speak, had rushed the blood out so rapidly, and in such quantities, that the *heart failed*, because the blood had all passed without giving time for replenishing.

When the heart takes on the mood just stated, it is like all moods, in this regard, it will spend its force in a little time if placed under restraint.

WHAT TO DO.

Take the extended left hand and place just below the heart, with the fingers pointing to the center of the chest, and place the right hand over the left, with the fingers touching the wrist of the left hand, and make a hard pressure, and continue the same until the heart has assumed normal action.

The ribs will prevent a pressure sufficient to *stop* the circulation, but will be sufficient to *control* the same.

If the Nobel prize should be accorded me, I would immediately erect a Nobel Sanitarium on my estate at Oswego, N. Y., so that the forty-five thousand Swedes in the city of New York could be treated and cured by myself, when treatment for lung troubles should be needed.

I should be very much pleased to be invited to give a lecture in Stockholm, Sweden, on lung troubles.

I am, very truly,

MARY E. WALKER, M. D.

The only woman who was an officer in the Medical Department of the U. S. Army.

(The great importance of the discovery of a method to prevent heart failure can not be overlooked by scientists.

EDITOR.)

Editorial

"It is obvious, from what I have said, that no man can hope for worldly honour or advancement, who is not placed in such a relation to external circumstances as may be consonant to his peculiar cerebral organs; and I would advise every parent, who has the welfare of his son at heart, to procure as extensive collection as possible of the skulls of animals, and, before determining on the choice of a profession, to compare with the utmost nicety their bumps and protuberances with those of the skull of his son. If the development of the organ of destruction point out a similarity between the youth and the tiger, let him be brought to some profession (whether that of a butcher a soldier, or a physician, may be regulated by circumstances) in which he may be furnished with a license to kill; as, without such license, the indulgence of his natural propensity may lead to the untimely reversion of his vital thread 'with edge of penny cord and vile reproach.' If he show an analogy with the jackal, let all possible influence be used to procure for him a place at court, where he will infallibly thrive. If his skull bear a marked resemblance to that of a magpie, it cannot be doubted that he will prove an admirable lawyer; and if with this advantageous conformation he combined any similitude to that of an owl, very confident hopes may be formed of his becoming a judge.

Headlong Hall.

THOMAS LOVE PEACOCK.



Epidemic
Paralysis.

The clinical and pathological investigations of the last two or three years have revealed a wider comprehension of infantile paralysis, and there are indications that several hitherto isolated diseases of the central nervous system are to be regarded as identical. The appearance of infantile paralysis in epidemic form has also been suggestive, and the more comprehensive term, "epidemic paralysis," has been proposed. One objection to this, however, is that sporadic cases are still more common and the word "polioencephalomyelitis" has also had some vogue. Several epidemics in England are reported in the *British Medical Journal*, and Professor SIMS WOODHEAD has found that

cases of acute anterior poliomyelitis have occurred side by side with a number of instances of epidemic cerebrospinal meningitis, and believes that the two sets of cases are related.

A contribution upon the subject by Dr. F. E. BATTEN has been published in *Brain*, in which Dr. BATTEN defines the term of "poliomyelitis" as "an acute infective disease, having a special selective action on the nervous system, which gives rise to a variety of symptoms dependent on the portion of the nervous system affected." Dr. BATTEN classifies the symptoms of these diseases as follows: "(1) a localized paralysis of one or more limbs; (2) an ascending paralysis, often rapidly fatal, owing to the involvement of the respiratory centers; (3) an acute ataxia; (4) a paralysis of one or more cranial nerves; (5) hemiplegia; (6) the symptoms of meningitis; (7) an acute mental defect; and (8) a type of case in which pain, especially on movement, is the most marked feature—so-called neuritis."

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS—NOVEMBER, 1911,
Deaths

Consumption	21
Typhoid fever	2
Scarlet fever	0
Measles	0
Whooping-cough	0
Diphtheria and croup	2
Grippe	1
Diarrhoeal diseases	3
Pneumonia	6
Broncho-pneumonia	3
Bright's disease	17
Apoplexy	8
Cancer	13
Accidents and violence	5
Deaths over seventy years	28
Deaths under one year	13
 Total deaths	147
Death rate	17.87
Death rate less non-residents	15.56

Deaths in Institutions.

	Resident.	Non-resident.
Albany Hospital	12	5
Albany Orphan Asylum.....	0	0
Child's Hospital	0	0
Albany County Jail	0	0
County House	0	4
Homeopathic Hospital	8	1
Hospital for Incurables	0	1
Little Sisters of the Poor.....	0	1
Public Places	1	2
Penitentiary	0	1
St. Margaret's House	1	3
St. Peter's Hospital	5	1
Austin Maternity Hospital	0	0
Albany Hospital, Tuberculosis Pavilion.....	4	1
Confederation of Labor	1	0
<hr/>	<hr/>	<hr/>
Total	32	20
Births		105
Still births		7

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

In the Bureau of Plumbing, Drainage and Ventilation there were two hundred fifty-two inspections made, of which eighty-eight were of old houses and one hundred sixty-four of new houses. There were fifty-six iron drains laid, fifty-three connections to street sewers, fifty-seven tile drains, one urinal, seventy cesspools, ninety wash basins, ninety-seven sinks, eighty-four bath tubs, seventy-four washtubs, three trap hoppers and one hundred twenty-six tank closets. There were one hundred twenty-eight permits issued, of which one hundred twenty were for plumbing and eight for building purposes. Thirty-four plans were submitted, of which three were of old buildings and thirty-one of new buildings. Forty-seven houses were tested, four with peppermint and forty-three water tests. Twenty-two houses were examined on complaints and seventy-five were re-examined. Five complaints were found to be valid and seventeen were without cause.

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported

Typhoid fever	4
Scarlet fever	3
Diphtheria and croup	30
Chickenpox	8
Measles	1
Whooping-cough	1
Consumption	29
<hr/>	<hr/>
Total	76

Contagious Disease in Relation to Public Schools.

	D.	<i>Reported</i>	S. F.	D.	<i>Deaths</i>	S. F.
Public School No. 7.....		1	..	..	..	..
Public School No. 10		1	..	..	..	..
Public School No. 20		8	..	..	..	..
Public School No. 17	1	..	..	..
Cathedral School		2	..	..	..	..
Lady of Angels School.....		1	..	..	..	..
Number of days quarantine for diphtheria:						
Longest.... 29		Shortest.... 10		Average....	15	1-15
Number of days quarantine for scarlet fever:						
Longest.... 21		Shortest.... 9		Average....	17	
Fumigations:						
Houses..... 48		Rooms.....			249	
Cases of diphtheria reported.....					30	
Cases of diphtheria in which antitoxin was used.....					30	
Cases in which antitoxin was not used.....					0	
Deaths after use of antitoxin					1	

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	4
Negative	6
Failed	0
Total	10

TUBERCULOSIS.

Living cases on record November 1, 1911.....	376
Cases reported during November, 1911.....	8
By card	19
Dead cases by certificate.....	8
	— 27
	— 403
Dead cases previously reported	13
Dead cases not previously reported.....	8
Duplicates	4
Recovered	4
Removed	11
Unaccounted for	3
	— 43
Living cases on record December 1, 1911.....	360
Total tuberculosis death certificates filed during November, 1911	21

Out of town cases dying in Albany:

County Hospital	I
Tuberculosis Pavilion, Albany Hospital.....	I
St. Margaret's House	I
St. Peter's Hospital	I
	4

Net city tuberculosis deaths..... **I7**

BUREAU OF DEAD ANIMALS.

Animals removed from 1st precinct.....	31
Animals removed from 2nd precinct.....	29
Animals removed from 3rd precinct.....	19
Animals removed from 4th precinct.....	16
Animals removed from 5th precinct.....	21
Kennel dogs removed.....	20
Kennel cats removed.....	25
Total	161
Horses removed	18
Dogs removed	68
Cats removed	79
Cows removed	0
Total	161

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	16
Initial negative	50
Release positive	16
Release negative	42
Failed	14
Total	138

Test of sputum for tuberculosis:

Initial positive	17
Initial negative	12

BUREAU OF MARKETS.

Market reinspections	124
Public market inspections	21
Fish market inspections	3
Pork packing house inspections.....	3
Rendering establishment inspections	2
Slaughter house inspections	4
Hide house inspections	5

MISCELLANEOUS.

Mercantile certificates issued to children.....	28
Factory certificates issued to children	9
Children's birth records on file	37
Number of written complaints of nuisances	20
Privy vaults	3
Closets	1
Plumbing	6
Other miscellaneous complaints	10
Cases assigned to health physicians.....	73
Calls made	152

Medical News

Edited by Arthur J. Bedell, M. D.

THE NEW MEDICAL COLLEGE.—On December 20, 1911, the Board of Supervisors of Albany County adopted a resolution transferring a part of the penitentiary grounds to the trustees of the Albany Medical College as a site for the new buildings. The new institution must be built within three years.

The hill on which the present penitentiary buildings are now located, twelve acres, will be used for the College which will include the new Macdonald Laboratory.

By the terms of the resolution, the College is required to maintain during the period of each school year, as part of its course of instruction, a medical and surgical clinic for the free treatment of poor persons, resident in the county.

THE ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING—STATISTICS FOR NOVEMBER, 1911.—Number of new cases, 151; classified as follows: Dispensary patients receiving home care, 10; district cases reported by health physician, 7; charity cases reported by other physicians, 33; moderate income patients, 75; metropolitan patients, 26; old cases still under treatment, 103; total number of cases under nursing care during month, 254. Classification of diseases for the new cases: Medical, 48; surgical, 4; gynecological, 5; obstetrical under professional care, mothers, 41; infants, 37; eye and ear, 3; skin, 0; throat and nose, 0; dental, 0; infectious diseases in the medical list, 13; infectious diseases in the surgical list, 0; disposition removed to hospitals, 6; deaths, 13; discharged, cured, 110; discharged, improved, 18; discharged, unimproved, 8; number of patients still remaining under care, 97.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; number of medical students in attendance, 3; number of nurses in attendance, 4; number of patients carried over from last month,

2; number of new patients during month, 2; number of patients discharged, 4; visits by head obstetrician, 1; visits by the attending obstetrician, 0; visits by students, 34; visits by nurses, 39; total number of visits for this department, 74.

Visits of Nurses (all Departments).—Number of visits with nursing treatment, 1,495; for professional supervision of convalescents, 481; total number of visits, 1,976; cases reported to the Guild by 4 health physicians, and 49 other physicians; graduate nurses 7, and pupil nurses 9 on duty.

Dispensary Report.—Number of clinics held, 86; number of new patients, 120; number of old patients, 247; total number of patients treated during month, 367. Classification of clinics held: surgical, 14; nose and throat, 7; eye and ear, 15; skin and genito urinary, 7; medical, 11; lung, 10; dental, 0; nervous, 2; stomach, 2; children, 10; gynecological, 8.

MEDICAL REVIEW OF REVIEWS.—Beginning with the January number, the *Medical Review of Reviews* will be under a new management and from the elaborate prospectus it would seem that the journal would have a greater influence on the professional life of its readers than ever before. The work will be divided into several departments controlled by specialists.

The subdivisions include editorials written by Dr. Jacobson; Eugenics and Medical Sociology by Dr. G. Frank Lydston; Original articles. Every article published in this department must be the result of original work and contain either the author's experiments or observations, or discuss ancient or present problems from a novel viewpoint. History of Medicine, by Victor Robinson; Science and Research, by Dr. Thurston H. Dexter; Medico-Legal Department, by Dr. William E. Butler; The Monthly Cartoon; Medical Psychology; Practical Therapeutics, by Dr. E. E. Cornwell; Medical Outlook; Notable Figures in Present Day Medicine; Medico-Literary Department; Book Reviews; Correspondence, and the Index Medicus.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The next annual meeting of the Medical Society of the State of New York will be held in Albany, April 16th, 17th and 18th, 1912. The members of the society will be divided into sections and there is every reason to believe that the meeting will be well attended and the interest be increased by this plan.

FACULTY APPOINTMENTS.—The following appointments to the Faculty of Albany Medical College have been made: Dr. Arthur W. Elting, Professor of Surgery and Clinical Surgery; Dr. John A. Sampson, Professor of Gynaecology, and Dr. Edgar A. Vander Veer, Professor of Abdominal and Clinical Surgery.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The annual meeting of the Medical Society of the County of Schenectady was held at the residence of Dr. John H. Collins, 620 State Street, on Tuesday, December 12, 1911, at 8.30 P. M. The President, Dr. Collins, read his address.

THE BOARD OF HEALTH ON WATCH FOR INFANTILE PARALYSIS.—The New York Department of Health has assigned inspectors to all orthopedic hospitals and dispensaries to insure the complete report of all cases of infantile paralysis. Circulars will be issued by the Board of Health and distributed to every family in which the disease occurs, giving information regarding the disease and its treatment. The minimum quarantine will be six weeks, after which disinfection or house renovation will be made obligatory. Circulars calling attention to these requirements have been sent to all physicians and they will henceforth be required to report promptly to the Board of Health all cases which they are called to treat.

CAMPAIGN FOR THE PREVENTION OF INSANITY.—The report of the Committee on Mental Hygiene of the State Charities Aid Association shows that during the past year 366,000 persons in the State have received a pamphlet entitled, "Why Should Anyone Go Insane?" issued by the committee, giving some of the facts as to the extent, causes and prevention of insanity. Another feature of the campaign has been the sending out of 24,645 circular letters asking co-operation, to physicians, clergymen, social workers and heads of various organizations. Of public meetings, magazine articles, pamphlets and letters more than 500,000 persons have been reached. Among new agencies for the treatment of incipient insanity inaugurated during the past year are the out-patient department of the Long Island State Hospital, in Brooklyn, the new Psychopathic Hospital at Syracuse, and plans for two clinics for mental diseases, one to be established at Kings County Hospital and the other at the new Gouverneur Hospital in New York City.

NEW YORK MEDICAL JOURNAL.—Dr. Charles E. de M. Sajous has accepted the position of Supervising Editor of the *New York Medical Journal*. Dr. Sajous' work in the fields of scientific investigation and medical literature is widely known.

AMERICAN JOURNAL OF SURGERY.—A special western number of the *American Journal of Surgery* will be issued in the early part of 1912. This issue will be composed of contributions by surgeons residing within a certain geographical area, yet of international reputation.

LOS ANGELES COUNTY MEDICAL ASSOCIATION.—In an elaborate bulletin edited by the Secretary of the Society concerning the correspondence between J. D. Works, Senator from California, on Senator Owens' bill for the conservation of human health and human life, the whole problem of the general medical supervision of the nation, State and cities, has been thoroughly discussed in all its phases with much correspondence showing that the Senator from California was opposed to the establishment of a national bureau of health. Many other points of extreme interest to all physicians are discussed in the interesting pamphlet of fifty pages.

PELLAGRA.—The C. V. Mosby Company of St. Louis have announced the publication of a book on "Pellagra." This book has been prepared by Dr. Stewart R. Roberts, of Atlanta, Ga., who has just returned from Italy, where he studied the disease in its natural habitat. While in Europe, the doctor made extensive researches regarding the etiology and treatment of pellagra, and the data contained in the book reflects the latest and best work that has been done in connection with this disease, making it a reliable guide to those seeking information on this subject.

PERSONALS.—Dr. W. J. MURPHY (A. M. C. '90), has changed his residence from 75 Pratt street, to 275 Farmington avenue, Hartford, Conn., and will devote his entire time to diseases of children.

—Dr. ARTHUR HOLDING (A. M. C. '01), announces that he will be in his Albany offices Saturday and Sunday of each week, by appointment only, beginning January 1, 1912. On the remaining days of the week he will be in New York City doing research work on the use of the Rontgen Rays and other forms of electricity in the early diagnosis of carcinoma of the alimentary canal on the treatment of cancer and malignant diseases with these same agents. This work will be done in connection with the Department of Pathology of Cornell University Medical College.

In Dr. Holding's absence, Dr. W. J. McKown will take charge of Dr. Holding's offices and practice, the office hours being from 3 to 6 P. M. by appointment.

Dr. Holding's New York address will be Rooms 501-504, Terminal Building, 103 Park avenue, New York City.

—Dr. F. J. ATWELL (A. M. C. '07), has been appointed attending pathologist of Cooperstown Hospital.

MARRIED.—Dr. JOHN A. WHITE (A. M. C. '10), of Albany, N. Y., and Miss Grace M. Stevens, of Keeseville, N. Y., were married on December 3, 1911, at Pittsfield, Mass.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

The Origin of Life. Being an account of experiments with certain super-heated saline solutions in hermetically sealed vessels. By H. CHARLTON BASTIAN, M. D., F. R. S., Emeritus Professor of the Principles and Practice of Medicine, University College, London. With ten plates, containing numerous illustrations from photomicrographs. pp. IX, and 119. G. P. Putnam's Sons, New York and London, The Knickerbocker Press, 1911.

This small book as the title indicates contains an account of numerous experiments with certain saline solutions in hermetically sealed vessels, which had been previously heated.

It revives the old controversy of spontaneous generation and contends that these experiments furnish proof of the continued occurrence of a *de novo* origin of living matter.

The results of the experiments recorded are absolutely at variance with the every-day procedures of bacteriologists and the fact that, as the foreword says, this memoir was submitted in October, 1910, to the Royal Society and was "not considered suitable for acceptance by the Society" indicates the unscientific character of the book. T. O.

Diseases of the Stomach. With Special Reference to Treatment. By CHARLES D. AARON, Sc. D., M. D., Professor of Gastroenterology and Adjunct Professor of Dietetics in the Detroit College of Medicine; Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine, etc. Octavo, 555 pages, with 42 illustrations and 21 plates. Cloth, \$4.75 net. Lea & Febiger, Philadelphia and New York, 1911.

The author states that in this work he has endeavored to cover the medical aspects of gastric disorders in such a manner as to answer the actual needs of the practitioner. The contents of the book are limited to what is definitely known regarding gastric disorders and their treatment, no speculative material being introduced.

The etiology, symptomatology, pathology, and diagnosis are considered only so far as necessary to an understanding of the outlined treatment which is fully discussed.

The chapter on Examination of Stomach Contents contains excellent paragraphs describing clearly the necessary tests which prove valuable in both diagnosis and treatment. Various test diets, and the methods of obtaining specimens for analysis are carefully outlined.

An interesting chapter is devoted to the consideration of Alterations in the Position of the Stomach and Other Abdominal Organs. Emphasis is laid on the treatment of these pathological conditions, especially gastrophtosis, in which condition the writer has obtained excellent results by employing the principles of mechanical support.

Careful consideration is given to treatment by massage, electricity, hydrotherapy, mineral waters, and medications. The use of antilytic serum and bacterial vaccines is discussed, and the indications for surgical intervention in the many gastric affections are outlined.

Eighty-six pages are devoted to the gastric neuroses which are considered in several subdivisions.

The book is clearly written, well illustrated, and has an excellent index. It is practical, and should prove a most useful book on this very important subject. T. L.

A Manual of Practical Hygiene for Students, Physicians and Health Officers. By CHARLES HARRINGTON, M. D., late Professor of Hygiene in the Medical School of Harvard University. Fourth edition. Revised and enlarged by MARK W. RICHARDSON, M. D., Secretary to the State Board of Health of Massachusetts. Octavo, 850 pages, with 124 engravings and 12 plates. Cloth, \$4.50 net. Lea & Febiger, Philadelphia and New York, 1911.

The fourth edition of Harrington's Manual of Hygiene is not as much a new edition as it is a reprint with some additions but with few other alterations. Ordinarily the printing of "new editions" that are but little more than reprints, are to be deprecated, but in this instance more than the cash box of the publisher is benefited because Dr. Richardson has added some valuable material while not altering the most excellent plan of the original work as written by the late Dr. Harrington.

It is a very practical and easily understood book and should be of fully as much value to the non-medical man who has to deal with sanitary, hygienic and similar problems as to the physician. S. L. D.

A Manual of Clinical Diagnosis. By Means of Laboratory Methods. By CHARLES E. SIMON, B. A., M. D., Professor of Clinical Pathology and Experimental Medicine at the College of Physicians and Surgeons, Pathologist to the Mercy Hospital, Baltimore. Seventh edition. Octavo, 778 pages, with 168 engravings and 25 plates. Cloth, \$5 net. Lea & Febiger, Philadelphia and New York, 1911.

It has been very properly said that most books on clinical diagnosis are so badly arranged that it takes almost as long to find what is wanted in the book as it does to diagnose the case. The new seventh edition of Simon's Manual is therefore a distinct improvement over former ones because it has been practically arranged for the busy man. It is divided into two parts; in the first are grouped together under appropriate headings various laboratory diagnostic methods with most excellent illustrations wherever they are possible; in the second part the diseases are alphabetically arranged and with each disease is given the laboratory findings constituting its picture. This second part is entirely new and throughout the entire work we find evidence of careful and painstaking revision by one who has completely mastered his subject.

S. L. D.

A Pocket Pronouncing Medical Dictionary. By GEORGE M. GOULD, A. M., M. D. Sixth edition. 34,000 words. This edition has been set from new type, it has been thoroughly revised, many obsolete words have been dropped and upward of 5,000 new words added; the number of pages has been increased by about 15 per cent., but the size of the book remains practically as before. Full limp leather, gilt edges, round corners, \$1.00; thumb indexed, \$1.25. Philadelphia, P. Blakiston's Son & Co., 1911.

This little book, bound in flexible leather, is intended primarily for the medical student and is certainly worth his careful consideration. In

addition to the 34,000 medical words, it contains several tables, such as "Symbols and Abbreviations" and "Physicians' Dose Table" and "Veterinary Dose Table." Its price, \$1, is a recommendation to the needy student.

S. L. D.

A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M. D., Ph. D., LL. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Tenth revised edition. Octavo of 1,328 pages, fully illustrated. Philadelphia and London, W. B. Saunders Company, 1911. Cloth, \$5.50 net; half morocco, \$7 net.

Without doubt this is one of the most popular of the many text-books on the practice of medicine. One reason for this popularity is of course because of the author, but more than that, aside from the subject-matter, the method of presentation and the very attractive style in which it is written makes it appeal to both teacher and pupil while it in no way detracts from its value as a work of reference.

The present revision has been much more extensive and complete than previous ones and many of the errors in the text have been corrected, although those in the index are still the same, a reflection upon the publishers rather than upon the author.

In the new matter is to be noted serum treatment in typhoid fever, Brudzinski's sign, Falk and Tedesco's test, Nastin's treatment of leprosy, appendicostomy in amebic dysentery, Erlich's remedy in sleeping sickness, salvarsan, the Wassermann reaction, Grawitz's treatment of pernicious anemia, Broadbent's sign and many of the other new and already accepted special treatments and methods in well known diseases.

While the desire for condensation is a distinct recommendation to the student, it of necessity makes it of less value to the practitioner, for whom the mention of a drug, a method or a symptom means that to thoroughly understand it, other and more complete works must be consulted.

S. L. D.

Hydrotherapy. A Work on Hydrotherapy in General, Its Application to Special Affections, the Technic or Processes Employed and the Use of Waters Internally. By GUY HINSDALE, M. D., Secretary of the American Climatological Association. Cloth. Price, \$3.50, 466 pages, with 145 illustrations. Philadelphia, W. B. Saunders Co., 1910.

The general practitioner owes a very distinct debt of gratitude to Dr. Hinsdale for this unusually readable, attractive and thoroughly scientific book. To the thinking man who wants results and cares not whether he gets them with drugs or without, yet has not reached that extreme known as "therapeutic nihilism," the book is most appealing, for while

the distinct advantages attending the use of natural methods such as hydrotherapy, balneotherapy and crounotherapy are clearly set forth the author makes it plain that "he by no means wishes to exclude the use of drugs."

The book is divided into sections the titles of which are: general hydrotherapy, special hydrotherapy (by which is meant the hydrotherapy as relating to different diseases or conditions), technic of hydrotherapy, crounotherapy, crenology and prescriptions of hydrotherapy. S. L. D.

Diseases of the Ear, Nose and Throat, Medical and Surgical. By WENDELL CHRISTOPHER PHILLIPS, M. D., Professor of Otology, New York Post-Graduate Medical School and Hospital; Surgeon to the Manhattan Eye, Ear and Throat Hospital; Fellow of the American Laryngological, Rhinological and Otological Society; Fellow of the American Otological Society; Fellow of the American Academy of Ophthalmology and Otolaryngology; Attending Otologist to the Post-Graduate Hospital and Babies' Wards; President of the Medical Society of the State of New York, etc., etc. Illustrated with 545 half-tone and other text engravings, many of them original; including 31 full-page plates, some in colors. F. A. Davis Company, Publishers, Philadelphia, 1911.

A good many text books on the ear, nose and throat have been written during the past few years, but there is always room for a book as excellent as this. One of the best things in the book is the section devoted to the influence of general diseases and conditions upon the ear, nose and throat. This section should appeal to the general practitioner and be valuable for reference.

The sections devoted to the ear as well as those on the nose and throat are really very complete and comprehensive works on these subjects. The illustrations, particularly those of operations or the various steps of operations, such as the radical mastoid, are unusually good.

There are certain conditions, such as rhinitis caseosa for example, described in Dr. Phillips' book, which are rarely noted in the text books on the nose and throat.

A formulary of the ear and throat departments of the Manhattan Eye and Ear Hospital is given at the end of the book. C. F. T.

Manual of the Diseases of the Eye for Students and General Practitioners. By CHARLES H. MAY, M. D. Seventh edition, revised, with 362 original illustrations, including 22 plates with 62 colored figures. William Wood & Company, New York, 1911.

The last edition of this valuable manual has been carefully altered and many additions made to keep it in the front rank of the best books for the student of ophthalmology.

The illustrations, concise, easily read text and general appearance of the volume commend it to all who wish a short summary on diseases of the eye. B.

MEDICINE

Edited by Samuel B. Ward, M. D., and Charles K. Winne, Jr., M. D.

Cholera from a Modern Standpoint.

ALVA H. DOTY. *American Journal of the Medical Sciences, Vol. CXLI,*
January, 1911.

The writer points out that the recent outbreak of cholera in Europe has furnished ample proof that the theories which have heretofore been held concerning the period of incubation and the general character in which this disease appears are more or less erroneous. Though it is probable that typical cases of cholera present themselves within five days after infection, there are mild or irregular cases the incubation period of which may cover a period of weeks or, in the case of "cholera carriers," symptoms of the disease may never appear, or, when they do, it is only after the administration of some intestinal stimulant sufficiently powerful to arouse the dormant organisms to activity, when the symptoms may occur with great suddenness and violence.

Such a case was recently seen at the Quarantine station in New York. A vessel arrived from Naples after a voyage of fourteen days, there having been no deaths on board during the trip, or any suspicious cases, or any case of intestinal disease. No persons were found sick on the arrival of the ship. During the emergency of the past fall it was required that the ships' surgeons furnish a list of all persons who had applied for treatment of any kind during the trip. In this instance there were six such steerage passengers, none of whom had been treated for diarrhoea or gastro intestinal trouble of any kind. They were all practically well on arrival. All were transferred to Hoffman's Island for further observation. After a period of two days' detention, two or three of them were given two grains of calomel at night, followed by a purge in the morning. The next day one of them was found in a state of collapse, and died within twenty-four hours. The character of the stools were typically choleraic before death. The autopsy failed to reveal the cause of death, but a bacteriologic examination of the stools furnished prompt evidence of cholera.

On another vessel arriving in New York from Italy there was found a case of cholera that was not very ill, and from the history the period of incubation could not have been less than sixteen days.

In view of our present knowledge of the disease, the means by which it is to be dealt with becomes a matter of great importance, especially to those responsible for the public health. From what has been said above it is clear that modern quarantine cannot offer full protection against the introduction of cholera into seaports or the interior, chiefly for the reason that the period of incubation is uncertain and the existence of "cholera carriers" has been practically proved. Reasonable and practical quarantine regulations will secure a thorough inspection of passengers and crews on incoming vessels and the detection of infectious diseases if they exist on board either in a mild or typical form, and will also include other means of inspection. However, the detention at quarantine of those who

have been exposed to cholera on shipboard must now be considered as only partial protection, because the assumption that any period represents the maximum time in which cholera infection will develop is entirely theoretical and probably erroneous. It would seem that the detention of suspects for more than five days, during which time typical cases would probably present themselves, is unreasonable and unjustifiable as a practical means of protection. This brings us to a realization of the fact that hereafter each community must be prepared to accept the responsibility which belong to it in the protection of its people against this as well as other infectious diseases, and forcibly suggests what practical sanitarians have long hoped for—the presence in each town or community of a health officer, or officials, who are not only theoretically but also practically familiar with infectious diseases, and who understand the importance of their early detection, either in their typical, mild or irregular forms. This, in the future, must constitute the logical and practical method of preventing the spread of such maladies.

The belief, however, that what we have recently learned in regard to cholera tends to weaken our defense against it, is erroneous. The fact is, that where modern sanitary regulations are in force the conditions which hold in the East, where it is endemic, will never exist. In the absence of a general infection it does not extend rapidly, and in the face of proper sanitary regulations, soon disappears. A general infection either on shipboard or on land is a serious and justifiable reflection on whoever may be in charge of the health of either community.

What can be done is well illustrated by the instances of two vessels which arrived in New York from Naples in October. On each there were over one thousand steerage passengers, and on each a case of cholera developed two days after leaving Naples, having been contracted before embarkation. Both cases were promptly recognized and isolated, and in neither instance did any secondary cases develop. General ship infection is now practically a thing of the past; formerly it was an easy matter, when the water supply was kept on deck, for it to become infected, but at present this source, as well as that through the food, is eliminated.

In general, the same methods of protection which are now employed to prevent a general typhoid fever epidemic would be equally formidable against cholera. What can be done is well shown in the case of Naples. During the outbreak of 1882 eight hundred to one thousand deaths daily was not unusual; during the recent epidemic there were rarely over twenty to twenty-five deaths per diem, and the outbreak continued only a month when it was officially declared to be at an end. Two factors are responsible for this: a proper water supply and the enforcement of modern sanitary regulations.

Where there is even a remote danger of the entrance of cases of cholera, typical or mild irregular forms, or cholera carriers, boards of health should rigidly investigate all cases of death from gastro-enteritis or intestinal trouble of any kind. This should always include a bacteriological examination of the alvine discharges or of material taken from the

rectum with swabs. At the New York Quarantine Laboratory it has been found that nearly half of the general examinations of this kind, even when there was no clinical evidence or special reason to suspect cholera, showed curved bacilli of various sizes and shapes. In many instances these resembled the cholera vibrio. If the latter forms are numerous the case should be regarded as suspicious until the full cultural tests have been made. In cholera carriers and mild cases of the disease the cultures may be positive even though the smears show very few suspicious organisms. It is usually only in the active cases that the smear and hanging drop made directly from the discharges or the material obtained by rectal swab will afford such unmistakable evidence as is needed to pronounce the case true cholera from the bacteriological standpoint. In all other cases it is necessary to isolate the organisms and prove that they are true cholera vibrios or otherwise by suitable tests.

A Discussion Concerning the Results of the Ehrlich-Hata Treatment in Vienna. (Zur Diskussion über die Erfolge der Ehrlich-Hata Behandlung in Wien.)

ESCHERICH. *Wiener medicinische Wochenschrift*, November 12, 1910.

The important question as to the value of so active a remedy as Ehrlich's Arsenobenzol, $C_{12}H_{12}O_2N_2AS_2$, must be first decided in various clinics, particularly in adult cases. So little is known concerning the tolerance of young infants for this remedy that the greatest care must be exercised. Ehrlich himself stated that the sudden destruction of the spirochaetae might result in a toxic condition. He recommended that as a beginning dose 0.005 G. pro kilogram of body weight should be used. The author in his experiments started with this amount and after satisfying himself that the injections did not do any harm, increased the dose to 0.01 G. pro kilogram which is the largest amount that has been used. Intra-gluteal injections are always used, and as a rule there is very little reaction. When first used the remedy was dissolved in methyl alcohol, but lately it has been placed in olive oil and the best results obtained. The author's experiments were confined to nursing infants, and the cases were watched for a long time.

Six children were treated and the following table shows the results. It is only fair to state that in the three fatal cases the syphilitic condition was so far advanced that they were considered hopeless from the beginning.

I. Infant artificially fed, three weeks old, premature birth. Papules on the face and extremities, saddle nose with foul discharge, paralysis of both arms, swelling of liver and spleen. Spirochaetae present; reaction positive—Wassermann. First injection July 13, 0.04 G., followed by disappearance of paralysis and of the spirochaetae and increase in weight. On Oct. 8, Sp.—W+. On this date there was a return of the symptoms followed by death. Autopsy showed destruction of bony framework of nose, gummatous of the liver and interstitial hepatitis.

2. Infant six weeks old, artificially fed, born with pemphigus. Extensive syphilides on the hands and feet; sunken nose with purulent discharge; Sp.+. Injection August 27, 0.01 G., followed by immediate improvement of all symptoms. Child died on September 5. Autopsy: Extensive atrophy of the organs; perifolliculitis and pigmentation of the mucous membrane of the large intestine.

3. Breast-fed child aged six weeks. Papular exanthem onnates and on the legs, rhinitis, enlarged spleen. Sp.+. First injection July 6, 0.04 G. On July 15, child was discharged from the hospital with only a trace of the exanthem and in a much better general condition.

4. Child aged four weeks, breast-fed, an extensive maculo-papular exanthem, and on the hands and feet diffuse syphilides with decubitus, rhinitis. Sp.+W.+. On 19th August, injection 0.016 G. Mother (W.+) was injected on September 6; 0.4 G. This was followed by a fading of the exanthem, rapid healing of the ulcerated patches and a marked improvement in general condition. Sp.—. On May 10, fresh papules appeared on the knee which, after injecting the mother, faded away. Child died later on after a severe diarrhoea. Autopsy: Diffuse purulent peritonitis (streptococci found), large liver, bronchitis, atelectasis.

5. Child aged five months, breast-fed. Papular eruption on face, neck, axillae and legs, rhinitis, saddle nose. Mother is twenty-two years of age and shows no signs of lues at this time. On September 10, mother was injected with 0.5 G. On September 24, child was brought to clinic much improved. Papules fading away.

6. Child, aged three months, artificially fed. For two weeks a papulo-squamous eruption on the face, buttocks and extremities. Rhinitis and great enlargement of the liver and spleen. Sp.+. W.+. Injection August 16, 0.022 G. This was followed by a much improved general condition. Liver and spleen much smaller. Eruption fading. Sp.—. On August 26, another injection of 0.024 G. was given. Sp.—. In next few days by August 29, eruption completely disappeared.

A change for the better follows the injections so promptly that every unprejudiced observer must get the impression of a specific influence. The rhinitis seems to resist the treatment more than any of the other symptoms. Particularly marked and rapid improvement was noticed in cases with syphilitic bone changes.

In conclusion the author states that the tolerance shown by infants for the injections would justify a gradual increase in the dose, and perhaps then Ehrlich's ideal of a *Therapia sterilans magna* with a single injection will be realized.

Typhoid Spine; with the Report of Two Additional Cases with Bony Changes in the Vertebrae.

THOMAS McCRAE. *The Johns Hopkins Hospital Bulletin, Vol. XXII, No. 240, March, 1911.*

The writer states that the essential character of the condition termed "typhoid spine" has been the subject of much controversy, but the find-

ings of recent years have settled the question in favor of definite organic changes,—a spondylitis,—as against a neurosis. In 1906 he reported the first two cases in which bony changes were confirmed with skiagrams. Since then there have been several such cases reported and he now adds two other cases to the list.

Case I. Male aged 45 was confined to the hospital during November and December, 1908, with a severe attack of typhoid fever, the points of interest of which were the marked toxæmia and the occurrence of a condition much like tetany during the course of the disease. He was discharged from the hospital on January 9, 1909, and continued perfectly well and at work, which involved much heavy lifting, until March 15, when he began to have much pain in the back. The onset of this was gradual, and he was able to continue at work for one week before having to give up on account of the pain. This was not constant but came on in paroxysms, and was worse at night.

He was again admitted to the hospital on April 17. At this time the examination of his back showed a well marked scoliosis in the lumbar region and an almost total obliteration of the usual lumbar lordosis. The spine showed very little movement below the tenth dorsal vertebra. The muscles of the back on both sides were contracted and stood out prominently, especially on the right side. There was some tenderness on palpation on both sides of the lumbar spine but no tenderness on pressure over the spinous processes of the vertebrae. All the reflexes were more active than normal. For a few days he had slight fever, which shortly disappeared. Later some tenderness over the spinous processes developed. He remained in about the same condition for some days until on April 23 he developed another typical attack of typhoid fever. This relapse, or second attack, was of short duration. During its progress he suffered extremely with pain in his back. There was no disturbance in sensation in his legs at any time.

Just before the onset of the fever an X-ray plate showed marked ossification of both lateral spinal ligaments in the lumbar region and a suggestion of the same in the anterior ligament. The same findings were observed after the second attack.

He was treated, after the second attack of fever was over, with plaster jackets. In July examination did not reveal any changes in the spine, but still the muscles on the right were more contracted than on the left. Slight pain was still present but no tenderness on pressure. Reflexes were still much exaggerated. Four months later he was practically well.

Case II. Also a male aged 45, was a worker in a factory where he had to do a great deal of heavy lifting. He was a patient in the hospital from June 14 to August 14, 1909, with a moderate attack of typhoid. He had two slight hemorrhages and a mild phlebitis in his right leg. During the following October he complained of weakness and dizziness, and toward the latter part of the month of numbness in, and inability to use, the right foot. He was admitted again to the hospital on November 9. He had then marked weakness of the extensor muscles of the foot with well marked foot-drop. There were marked sensory disturbances of the

inner side of the foot with electrical disturbances. There was no pain in the back at any time and no definite evidences of spondylitis, except for slight restriction of motion in the lumbar region of the spine.

An X-ray at this time showed a definite deposit of bone on the left side of the spine between the articulations of the III, IV, and V lumbar vertebrae, which practically obscured the articulations. The bone was deposited in the lateral ligaments, and the anterior and posterior ligaments seemed free. There was no deposit on the left side.

The writer mentions as points of especial interest in this case the occurrence of spondylitis without pain, formerly considered as an essential symptom. Without a radiogram the diagnosis in this case would not have been made and the condition in the popliteal nerve would have been considered as an ordinary post-typoid neuritis. The involvement of the nerve root on the opposite side from that on which the deposit of bone took place is seen not infrequently in spondylitis.

Formerly the term "typhoid spine" was applied to a symptom picture which was regarded by many as a neurosis in the majority of cases. That this may be possible in some cases the writer acknowledges, but states that the increase in our knowledge speaks against this view, as an increasing number of cases have been reported with definite bony changes. This is analogous to the change in our views concerning spondylitis generally. Many of the cases formerly regarded as lumbago, rheumatism, etc., are now seen to be cases of spondylitis, probably associated with various organisms in different cases. The proportion of cases of "typhoid spine" with bony deformity or shown by the X-rays to have bony changes is as large as could be expected. Spondylitis is of varying degree, and many of those cases we see with other conditions, such as arthritis deformans, give no positive evidence of bony change either by deformity or radiograms. To decide as far as possible the question as to whether the condition is due in all cases to an organic process in the spine or its attachments, the writer considers the various changes which suggest definite local involvement.

1. Local swelling has been frequently noted. Redness has been present in a few cases, tenderness in many, sometimes over the spine itself, sometimes over the adjacent muscles. Rigidity of the spine may be considered as being almost invariably present.

2. Changes in the spine. Kyphosis has been noted in about one-third of the cases. Scoliosis has been often seen, in nearly all of which it disappeared after an interval. Alteration of the lumbar curve is not uncommon.

3. Evidences of involvement of the nerve roots. These are very variable, but are very suggestive. Sensory changes are common and alterations in the reflexes often occur. Sometimes the symptoms are due to evident pressure on the cord. Marked muscular atrophy of the leg has been reported.

4. Radiograms. These have shown definite evidence of bony changes in a sufficiently large number of cases to support strongly the view that

organic changes are the rule in this condition. The writer mentions the chief radiographic findings recorded in the literature.

5. Suppuration. It has been pointed out that if the condition is due to the local action of typhoid bacilli, suppuration might be commonly expected as typhoid bone lesions in general show a marked tendency to pus formation. However, one of the prominent features of typhoid spine is the absence of suppuration. No definite case of suppuration has as yet been reported though the literature contains some suggestive cases of this condition.

Treatment. The writer points out the influence of trauma, and emphasizes the fact that we should warn our patients convalescent from typhoid fever against any occupation which might throw strain on the spine. He points out the fact that early and active treatment should be had in order to limit the process if possible and in any case to save the patient much suffering. He suggests the use of vaccines as in the prevention of typhoid fever. Two points are to be remembered in the treatment of the condition when actually established, the relief of pain and the protection of the spine, which is often structurally weak. He places the most reliance in some form of fixation apparatus, either a brace or a plaster jacket, a view in which he agrees with most authors on the subject.

Two Cases of Congenital Haemolytic Jaundice with Splenomegaly. Observations on Haemolytic Jaundice.

WILLIAM S. THAYER and ROGER S. MORRIS. *The Johns Hopkins Hospital Bulletin, Vol. XXII, No. 240, March, 1911.*

In 1900 Minkowski reported the history of a group of cases belonging to one family, all of whom showed the clinical syndrome of chronic acholuric jaundice, splenomegaly and urobilinuria. The appearance of these symptoms could be traced through three generations affecting at least eight members of the family. The general health of these individuals was not essentially impaired and no important blood changes were noted. He regarded the condition as dependent on an anomaly of the blood pigment transformation, perhaps dependent upon a primary change in the spleen. One of his patients came to autopsy. There were no especial changes found in the liver, the bile passages were quite clear. The spleen was enlarged, simple hyperplasia and hyperaemia. The kidneys showed a very marked deposition of iron-containing pigment.

Even before Minkowski's observation this clinical picture had been seen and reported, and since then many cases have found their way into the literature. One writer has reported nine cases in three generations of the same family.

In addition to the clinical features already mentioned, the following are the most important noted. The jaundice appears early in life, often immediately after birth, perhaps not till later, even not until puberty. It is usually of moderate degree varying from a pale lemon yellow to a deep

golden color. It is remarkably variable in degree, increasing often under physical effort or emotional excitement. The stools are of normal color or pleiochromic, especially under those conditions associated with an increase in the jaundice. The urine is of high color, but free from bile; urobilin is usually demonstrable. There is present an anaemia of moderate degree, with anisocytosis and polychromatophilia. There is little poikilocytosis. The color index is somewhat reduced. On vital staining ten to twenty per cent. of the red cells show marked granulation of the type described by Pappenheim, Vaughan and others. The blood serum is clear yellow, contains bilirubin, but usually not urobilin. The leucocyte count is usually somewhat higher than normal. The differential count shows some activity on the part of the bone marrow manifested by the presence of a high percentage of eosinophiles and the occurrence of myelocytes and nucleated red blood cells. The blood serum shows a high degree of hypertonicity, perhaps as a provision of nature to protect the red blood cells which show a marked degree of fragility against hypotonic solutions. The patients are usually remarkably free from any subjective symptoms either due to the anaemia or the biliary intoxication. Perhaps one exception to this statement might be made in the case of the attacks of abdominal pain which many of these patients have, suggesting biliary colic. This is so severe at times that the patients have come to operation. They are often accompanied by elevation of temperature and exacerbation of the jaundice. In many of these cases the pain is probably due to the passage of small pigment stones which have been found in the gall bladder.

The writers report two typical cases of this condition which they have carefully studied. Both of the cases, one a girl of sixteen when first seen and the other a woman of twenty-seven, were well jaundiced, but aside from the presence of the coloration suffered no inconvenience from it, and neither showed any symptoms referable to the anaemia which was present.

In addition to this congenital haemolytic jaundice which is apparently a clinical entity, there is another similar condition which comes on without apparent cause in adult life. This however is more an interesting syndrome than a true disease picture. The acquired form may be divided into two types, primary and secondary, the former of which arises without apparent cause or in the course of some acute transient malady after the subsidence of which it pursues an independent course. The secondary type is observed as a transient condition associated with acute infections or poisoning, or as a terminal event in some chronic disease.

One great difference exists between the congenital and acquired forms in that with the latter there is usually an anaemia of sufficient grade to occupy a prominent place in the clinical picture. Indeed it may be intense and associated with marked subjective symptoms. Another very striking difference between the two types is the fact that the corpuscular fragility which is so marked in the congenital form is but slight in the acquired. There are in these latter cases also great variations in the severity of the

jaundice from time to time in the same patient, often associated with inverse alterations in the blood count.

Acquired haemolytic jaundice shows itself in several clinical types:

- I. Those cases simulating cholelithiasis.
- II. Those simulating pernicious anaemia with jaundice.
- III. Those resembling chronic infectious cholangitis.
- IV. Those manifesting themselves with all the symptoms of an icterus gravis.
- V. Cases which leave one in doubt as to whether they should be classed as Banti's disease or as cases of cirrhosis of Hanot's type.

The syndrome is, however, sufficiently definite and easily recognized if carefully studied, by the absence of bile in the urine, its presence in the blood, the urobilinuria, the presence of a large percentage of granular cells on vital staining, the fragility of the red cells, and by the commonly present auto-agglutinative power of the serum.

Pathogenesis. The writers discuss the various theories which have been advanced as to the cause of the two forms of the condition but are not able to come to any definite final conclusion. The congenital form is probably due to the greatly increased fragility of the red blood cells, a congenital defect by which the corpuscles have failed to acquire in the first few days of extra-uterine life their normal resisting powers, but retain permanently their embryonic fragility. The case of the acquired form is less simple, even for theoretical explanation. It is probably due to the circulation in the blood stream of some soluble haemolysin, possibly due to some infection as is suggested by the association of fever with exacerbations of the jaundice and synchronous increase in the anaemia.

The writers also discuss with equally indeterminate results the question as to the seat of the haemolysis and the actual cause of the jaundice, *i. e.*, the origin of the bilirubin found in the circulation.

Treatment. All writers upon this subject have recommended the long continued use of large doses of iron, with the usual adjuvants suitable for the treatment of severe cases of anaemia in those cases in which the anaemia is prominent. In the acquired form long continued treatment may result in cure, but in the other form (the congenital) cure is unknown. However, a temporary improvement in the anaemia is often seen. The exhibition of iron is the one method of treatment which trial has proved to be of any value.

Mechanical Methods for the Control of Dangerous Hemorrhages from the Stomach and Intestine (Ueber mechanische Methoden zur Stillung gefährlicher Magen und Darmblutungen).

G. KELLING. *Münchener medizinische Wochenschrift*, No. 51, December, 1910.

Hemorrhage from the stomach is usually treated by so-called internal therapy, which generally consists in avoiding everything which would

favor hemorrhage and administering drugs which may increase the tendency to coagulation. Operations are sometimes undertaken.

Rovsing advocated the use of the cystoscope, after opening the stomach to detect the bleeding point. All of this, however, presupposes an operation.

The writer has been especially interested in the question as to whether mechanical measures might not be of use. He reports one case of an irregular palpable resistance over the region of the stomach from which very severe hemorrhage was occurring which was controlled by the adjustment of a pad over the mass held firmly in place by an elastic band. He advises this method of compression wherever the stomach wall can be reached in hemorrhage of the stomach. In other instances, he advises placing the compression over the region of the pylorus, and if this does not suffice, he advises introducing a catheter into the stomach through the nose and attaching to the end of the catheter an inflatable thin rubber bag which is then blown up and drawn firmly into the cardia. In this way both of the openings into the stomach are controlled and the pressure of the accumulated blood content tends to control the hemorrhage.

This method of exerting pressure on the cardia is of especial value in cases of hemorrhage from enlarged veins at the cardia resulting from cirrhosis of the liver. He advises refraining from the use of salt solution under the skin until the hemorrhage is stopped for fear of increasing the blood pressure. He also emphasizes the fact that adrenalin by mouth cannot be of value in the control of an actively bleeding vessel of the stomach wall.

He next calls attention to the method of inducing pressure upon the abdominal viscera by means of sterilized gas, preferably oxygen, introduced into the abdomen through the trocar. He states that the trocar can be introduced into the upper right quadrant of the abdomen with comparative safety by taking care to withdraw the puncturing needle before it passes through the peritoneum and completing the puncture with the canula.

He reports three cases of severe hemorrhage from the stomach controlled in this manner, in two of which the hemorrhage was controlled and the patients recovered. In the third case, the hemorrhage was controlled but recurred a few days later and the patient died. At autopsy the hemorrhage was found to be due to enlarged veins at the cardia. This would undoubtedly have been controlled by his method described above.

He finally considers the question of inflation of the colon in order to increase the intraabdominal pressure and in three instances, he has controlled severe hemorrhages from the stomach by this means. He advises therefore that in all cases of severe hemorrhage from the stomach some or all of these mechanical methods of exerting pressure upon the bleeding stomach, should be practiced before an operation is had.

NEUROLOGY**Edited by Henry Hun, M. D.**

*A Contribution to the Relation of Alcoholism to the Etiology of Epilepsy.
(Einige Beziehungen des Alkoholismus zur Aetologie der Epilepsie.)*

E. HERM MULLER. *Monatsschrift für Psychiatrie und Neurologie, August, 1910.*

The writer of this paper draws some interesting inferences from a study of the occurrence of alcoholism in the immediate ancestry of epileptics, and also makes incidental reference to other conditions of degeneration due to this form of perverted antecedents. A particularly interesting schedule is made showing the births of epileptics traceable to alcoholism at those periods of the year usually celebrated by feasting, as during the Christmas holidays and at Easter. A number of tables are presented in confirmation of the degenerative influence of alcohol, and the results of the inquiry, which includes an analysis of case histories, are given, as follows:

1st. The ancestral curve of epilepsy reveals especially conditions very similar to that of feeble-minded persons, although the epileptic curve is much more prominent. Because this may be traced to those periods of the year in which the greatest amount of alcohol is consumed, it is clear that epilepsy is in very great measure a consequence of alcoholism in the parents.

2nd. The statistics of heredity in epileptics now show that an alcoholic heredity is four times as frequent as that of epilepsy itself.

3rd. The germinating fluid derived from the maternal grandparents affects the destiny of the descendants, in that the daughters, without being themselves abnormal may show a procreative tendency potentially morbid.

4th. Alcoholic epilepsy as an epilepsy induced upon a healthy constitution by the use of spirits does not exist. Alcohol may induce latent epilepsy in an individual or may so increase the tendency to spasm already present that sooner or later epilepsy may develop. All these forms of epilepsy disappear as a rule by removal of alcoholic drinks or by other therapeutic measures. Return to the drink habit may cause a renewed outbreak of the disease that is not always curable, but often leads to epileptic dementia.

5th. The use of alcohol by nursing women may induce epileptic seizures in the child.

6th. Epileptics should be strictly enjoined against any use at all of alcohol.

Babinski's Sign in Diphtheria.

J. D. ROLLESTON. *Review of Neurology and Psychiatry, July, 1910.*

This paper is based on observations made on 877 cases of diphtheria in which the plantar reflex was investigated in the course of the last four years. An extensor response of the great toe with extension or flexion of

the other toes was found to be present for varying periods in 172 cases, or 19.6 per cent.; in 29 flexion alternated with extension; and in 676 the normal flexion was present. The absence of any response was not observed in any case. Special care was taken by varying the intensity of the stimulus to eliminate voluntary movements, so as to avoid mistaking for abnormal what was really a physiological movement of defense. Owing to the occurrence of Babinski's sign after large doses of strychnine (Babinski, Collier), it should be stated at the outset that no case has been treated with this drug. None of the cases which exhibited the extensor response showed any other signs of disease of the pyramidal system, nor was the response seen with special frequency in rickety children or in those who had learnt to walk late. High temperature and delirium, which are the usual associates of severe scarlet fever, and as such were present in Kiroff's cases, are exceptional in diphtheria, and were therefore found in very few of the present series. The character of the reflex was by no means the same in all cases. In some it was the deliberate movement indistinguishable from that met with in organic diseases of the pyramidal system, in others it more closely resembled the infantile response in the briskness with which all the toes were extended, while others showed an intermediate character.

In 33 cases the extensor response was at first bilateral, and afterwards was present on one side only before it was replaced by flexion. In 27 cases the extensor response was unilateral from the first, being present in 19 on the right, in 8 on the left side only. A transitional stage of one or more days was often observed, in which any of the following responses might be seen:

(1) All the toes yielded a flexor response, but the flexion of each hallux was less decided than that of the other toes.

(2) The response was at the second flexor, but prolonged stimulation produced extension of each hallux or of all the toes.

(3) Alternate extension and flexion similar to what occurs normally in the development of the healthy child.

In many cases, however, none of these transitional stages was noted, and a well-marked extensor response present one day would be succeeded on the following by the normal flexion.

The results obtained by this investigation are summarized as follows:

(1) Babinski's sign was found in a considerable percentage (19.6 per cent.) of all cases of diphtheria, the character of the response being rapid, deliberate, or intermediate in character.

(2) The extensor response in diphtheria is not confined to infants, but may be obtained, though with decreasing frequency and duration, especially after the eighth year, until adult life.

(3) It is essentially a phenomenon of the acute stage, in most cases being replaced by flexion in convalescence. Transition stages often exist in which various forms of response may be obtained.

(4) Babinski's sign is not pathognomonic of diphtheria among the acute infections, since it occurs in typhoid fever, scarlatina, lobar pneu-

monia, and probably other acute diseases; but its greater frequency in diphtheria than in non-diphtheritic angina accords the sign a certain diagnostic value.

(5) It is more frequent and persistent in the severe than in the mild forms of diphtheria, as is shown by the character of the angina, the higher mortality, the greater frequency of paralysis and albuminuria among the cases in which it occurs. Its presence has, therefore, a certain prognostic value.

(6) It is not associated with any special condition of the tendon jerks, and is never accompanied by ankle clonus.

(7) It is probably due to a transitory perturbation of the pyramidal system by the circulating toxines, comparable to the slight degree of meningeal reaction which is a frequent occurrence in acute infections.

Brain Syphilis. (Zur Kasuistik der Hirnsyphilis.)

GEORG BRANDT. *Zeitschrift für die gesamte Neurologie und Psychiatrie*,
IV Band, 3 Heft, 1911.

Symptoms of syphilitic diseases of the mind present very great variety, due to differences in character, the location, the dissemination and the rapidity of the course of the disease. Alzheimer has recently directed attention to the fact that syphilitic meningo-myelitis, especially when occurring upon the convexity, develops and proceeds slowly, although the base and the cord may be very little affected, resulting in insignificance or absence of disease of the cranial or spinal nerve roots.

These patients complain more especially of general nervousness, as headaches, languor, irritability and slight mental incapacity, until there may develop intercurrent attacks of delirium, which eventually may lead to complete dementia.

In the event of convulsive seizures during the course of disease with the resulting palsies, a Wassermann reaction may assist in differentiating arterio-sclerosis and general paralysis. In a case resembling this, the histological examination revealed an inflammatory infiltration of the pia with lymphocytes spreading over the entire convexity and at various areas reaching a high degree of infiltration. From the pia the process extended in the lymph chambers of the cerebral vessels, which in the cortical regions was quite as distinct, and was even ascertainable in the centrum ovale. The intensity of the process in the brain itself was proportionate to that of the infiltration of the pia. As a result there was some nuclear proliferation and an increase of connective tissue. This pathological basis of the symptoms was consistent with the localization upon the convexity rather than upon the base. The prominence of mental symptoms with the absence of paralysis was suggestive, although there was some resemblance in the clinical picture to general paresis, and it is always difficult from the clinical standpoint to exclude general paresis from this form of syphilitic brain disease. It will probably be necessary to introduce as a routine measure in these cases a resort to the Wassermann reaction and an examination of the cerebro-spinal fluid.

Urinary Hyperacidity and its Relation to Neuritis, Neuralgia and Myalgia.

THOMAS R. BROWN. *Bull. of the Johns Hopkins Hospital. Vol. XXII,*
No. 238, January, 1911.

The writer states that although we recognize in certain types of neuritis, neuralgia and myalgia various causative factors, yet there remains another large group of cases in which the etiology is obscure, and which, on account of this obscurity, are called idiopathic. The causes which are known to produce the above conditions are mostly poisons of some nature, introduced into the body from without, or produced within, either due to the action of micro-organisms or to defective metabolism. Among these toxins may be mentioned some metals, as arsenic and lead, alcohol, drugs such as the aniline compounds and sulphonal, the ptomaines and leucomaines; the toxins produced by certain fevers, such as scarlet fever, typhoid fever and diphtheria, and those arising in the course of diseases affecting metabolism, as diabetes. They are present in association with cachexias, malnutrition and anaemias, in certain organic diseases of the nervous system, in certain diseases of the circulatory apparatus, after exposure to cold, and after trauma.

The writer calls attention to the fact that in the group of so-called idiopathic cases an examination of the urine shows an abnormal amount of acid present. He suggests that this is due to, and is an expression of, some disturbance of metabolism, and that the pain is merely a symptom of autointoxication, and points out that the administration of alkalies with the consequent diminution of the acidity is associated with a marked improvement in the symptoms.

The series reported comprises 44 cases, classified as follows: 5 cases of neuritis, 2 of sciatica, 8 of neuralgia, 11 of neuralgic headache, 5 of lumbago, 1 of torticollis, 23 of myalgia. There were 14 males and 30 females, ranging in age from 16 to 55 years. Heredity played a very minor rôle in the cases under consideration, only six of them showing any family tendency towards rheumatic or gouty conditions. The digestion and general habits were good in the great majority of the cases: 10 complained of indigestion, either gastric or intestinal, and 10 of constipation. Three used tobacco extensively, six alcohol in considerable amount, and five admitted being careless and rapid eaters. Eye strain was ruled out by proper examination of the eyes and the fitting of glasses when that was found necessary. In the female patients the pain was usually increased at the time of the menstrual period, when of course metabolic disturbances are apt to be increased, and in two cases the trouble began at the time of menopause.

While the urinary acidity varies within quite considerable limits in health, depending upon the specific gravity of the urine, which in turn depends upon the relative amounts of solids and liquids ingested, the amount of exercise, etc., broadly speaking it is 25 when expressed in terms of deci-normal sodium-hydroxide solution, i. e., it takes 25 cc. of such solution to neutralize 100 cc. of urine, phenolphthalein being used as an indicator. This figure has been determined by the writer after a

large number of titrations of urine from normal individuals, and his results have been confirmed by other investigators.

In the present series of cases 43 of the 44 gave readings ranging from 35 to 138, and of these 36 had an acidity of 50 or above, 16 of 75 or above, 6 of over 100, and 2 of over 125. The average acidity of these 44 cases, which with recurrences gave 52 readings, was 69.1, or, nearly three times the normal, 25. However, most of these urines were of increased specific gravity, so that a fairer comparison will be had if they are reduced to the uniform figure of the normal density. In 34 of the 44 cases this was done and it was found that at the specific gravity of 1015 the average acidity was 51.5, or about double the normal figure.

The writer investigated the question whether or not there was any probable connection between this increase in urinary acidity and the acidity of the gastric juice, but concluded that such relationship does not exist. He calls attention to the analogy between these cases and those in which increase of the urinary acidity is associated with symptoms suggesting cystitis, notably pain in the bladder and on urination, conditions entirely absent in this series, and to the possible analogy between these cases and the neuritis and neuralgia occurring in diabetes and gout, conditions in which there is a marked disturbance in metabolism, and where there is a distinct tendency towards increased acid production or acid elimination. This suggests that any condition which has as a characteristic an increase in the amount of acid produced would seem to possess a tendency to show symptoms in the nervous tissues, which seem to be especially vulnerable to acids, whatever their chemistry or source of origin.

The treatment of these cases was based upon the urinary findings and upon the theory that the symptoms were due to the circulation of toxins produced by faulty metabolism, and comprised a simple dietary, the drinking of large amounts of water, and the taking of alkalies in sufficient amounts to reduce the urinary acidity to normal or below. In some cases it was found necessary to use sedatives or opiates, the Paquelin cautery, and the application of heat or cold. Rarely, however, was anything needed but the alkalies, though these had to be given in large doses, in some cases even enormous; thus, the writer mentions one case of stubborn sciatica of many years' duration, in which the administration of one ounce of alkali daily for four weeks reduced the acidity from 138 to only 89. The salts used were sodium citrate or bicarbonate, potassium bicarbonate, or lithium carbonate. Some of the cases showed a recurrence of symptoms if the regimen was stopped, though in others there was entire relief for long periods of time.

Of 16 cases, whose urine was examined after they were either cured or greatly improved, the average acidity was 21.5, but if corrected to a specific gravity of 1015 it was 24, or practically normal. The writer did not attempt to demonstrate whether the acidity was due to an increase in the acid phosphates or the organic acids, but believes that it is due to the latter.

OPHTHALMOLOGY

Edited by Charles M. Culver, M. D.

Bilateral, Metastatic Ophthalmia following Epidemic, Cerebro-spinal Meningitis. (Ophthalme métastatique bilatérale, à la suite de méningite cérébro-spinale épidémique.)

G. F. COSMETTATOS. *Annales d'Oculistique*, October, 1908.

Besides producing isolated inflammation of various parts of the eye, cerebro-spinal meningitis also provokes a suppurative or plastic metastatic ophthalmia; sometimes loss of vision results from this.

According to Uhthoff, who has reviewed and collated the statistics of thirteen other investigators (whose names are given), the frequency of metastatic ophthalmia is from 4 to 5 per cent.

The affection is, as a rule, unilateral, but it happens, however rarely, that both eyes of a pair are simultaneously affected. Thus, in the observations made by Uhthoff the affection was bilateral but thrice, and five others of those whom he quotes as having made investigations in this line report similarly. Hence, Cosmettatos' opinion that a case which he saw during a recent epidemic of cerebro-spinal meningitis at Thebes, in view of its bilateral quality and the rarity of this, is worthy of report.

S. G., female, aged twenty-eight. Her father died of cardiac syncope; mother and brothers are healthy. Intermittent fever, occurring at the age of fifteen and lasting two months, and another attack at the age of twenty-six and cured by quinine, are the personal antecedents noted.

February 10, 1908, after finishing her usual day's work, the patient went home suffering from vertigo and slight pains in the temples, which became progressively more intense. She felt compelled to go to bed immediately. The pain in the head and neck increased to such an extent, and so violent a fever set in, that a physician was summoned, who diagnosed cerebro-spinal meningitis. The disease lasted about a month.

As regards the eyes, the patient and her relatives said that, seven or eight days after the appearance of the malady, the sight of both eyes began to be blurred.

The right eye was painful, its conjunctiva was red, its vision diminished gradually until, at the end of ten days, that eye no longer had any appreciation of light. In the left eye the inflammatory phenomena were much more marked than in the right; the chemosis of the conjunctiva and edema of the lids were also more pronounced than in the fellow-eye. This left eye's vision was also completely lost in twelve to fifteen days.

On the 22d of April the lids of the right eye were normal; slight redness was noticeable at its corneo-scleral limbus; its cornea was transparent, but the anterior chamber was entirely effaced. The iris, somewhat atrophied, was fixed to the posterior surface of the cornea. There were posterior synechiae, and the pupil was occluded by a whitish exudate. Ophthalmoscopic examination was then impossible. The eyeball was soft and its vision *nil*.

The condition of the left eye was like that of the right, except that the redness at the corneo-scleral limbus was intense and the synechiae of the iris with the anterior capsule of the lens were total.

A solution of atropin was instilled for a few days in both eyes, with the hope to break up the synechiae and somewhat increase the intraocular tension. No dilatation of the pupil was, however, thus obtainable. After a few days an iridectomy was performed on the right eye by means of Tyrrell's hook.

The operation was partially successful, despite the hindrance of the lack of an anterior chamber and the existent synechiae. After the operation the patient distinguished somewhat of objects placed near the eye and saw light. Ophthalmoscopic examination showed the pale reddish tint of the fundus, but details were not visible.

Similar operation of the left eye was precluded by the totality of the synechiae between the iris and cristalin.

By the symptoms present in this case, as well as by its etiology, it is evident that it was one of non-suppurative, metastatic ophthalmia, resulting in loss of vision of both eyes.

From the point of view of pathological anatomy, various authors seem to have proved that purulent metastasis nearly always begins in the retina or choroid and the uveal tract. It is generally a question of purulent retinitis with propagation of the inflammation to the vitreous and iris.

As to lesions of the optic nerve and its sheaths, they are lacking in the results of most pathologico-anatomical examinations, which fact does not jibe with the hypothesis of the propagation of the inflammation of the metastasis in the interior of the eye by that route.

Martini and Rohde have found meningococci in the blood of patients having metastatic ophthalmia as a sequel of meningitis, even quite a while after the appearance of the disease; which proves, according to these authors, that the metastasis is through the circulation. Moreover, the presence of a metastatic ophthalmia, with slight meningitic phenomena, pleads in favor of this way of thinking.

The presence of meningococci in the interior of the eyeball is shown only at the beginning of the disease; these microbes have disappeared if the vitreous be examined somewhat later, which proves the correctness of the conclusion of most of the interested investigators that these are the microbes that produce metastatic ophthalmia.

Lesions of the Lymphoid Tissue of the Conjunctiva.

E. TREACHER COLLINS. *Royal London Ophthalmic Hospital Reports*, January, 1910.

This paper is one which was read by E. T. Collins, of London, before the Section of Ophthalmology of the British Medical Association, held at Belfast in 1909, and it was used for the purpose of opening a discussion on the subject of lymphoid disease of the conjunctiva. Owing to the long duration of the disease, but few have the opportunity of

following it from start to finish. Collins, being attached to the Ophthalmia Schools under the Metropolitan Asylums Board, has had particular advantages in this respect, and during the last five years 2,441 patients have been admitted, of which 700 were suffering from trachoma. Many of the cases are seen at a stage far earlier than usual. At first the symptoms resemble those of an acute muco-purulent ophthalmia, which however does not yield to treatment, and when the congestion is somewhat abated, typical lymphoid follicles appear in the tarsal conjunctiva, and the retro-tarsal folds become apparent. If energetic treatment is continued from the first, such cases are usually cured in about 18 months. He cites several cases proving the contagious nature of the disease, which there can be little doubt is due to a micro-organism. He describes the organisms found by Prowazek and by Greef independently; but whatever the disease is due to, it is certainly spread only by direct inoculation and is not due to infection through the air; the germs are easily killed by drying and are not spore-bearing.

The evidence shows that the organism is situated in the fibro-adenoid layer of the conjunctiva. Collins then describes the histological appearance of the disease. Gray, scattered, avascular spots appear in a very early stage, which are rather smaller than a pin's head, and these are of considerable diagnostic importance. These have been termed elementary or primary granulations. The true trachoma organism appears to be non-pyogenic. Trachoma *per se* is essentially a chronic disease, and acute symptoms are due to a mixed infection, generally to either the gonococcus or the Koch-Weeks' bacillus. The trachoma follicles show a great tendency to become confluent and to produce bodies resembling in size and shape grains of boiled sago, which, as they enlarge, rupture, and the gelatinous contents escape. The fibrous tissue which forms in trachoma is probably mainly developed from fibro-blasts derived from connective tissue cells, and, in cases of long standing, forms immediately beneath the epithelium; but if the cases are treated early, many are cured without the development of much fibrous tissue. Collins looks upon pannus as due both to the mechanical irritation from the roughened lid, and also to a real infection of trachoma. Of the immense number of different treatments adopted, those have proved the most effective which cause either rupture of the follicles on the surface and discharge of their contents, by causing inter-current inflammation leading to the follicles becoming invaded by poly-nuclear leucocytes, or by the replacement of the adenoid layer by fibrous tissue, which by cutting off the blood supply, causes them to atrophy. These ends are obtained by "expression" followed by painting with sublimate 1-100, or by rubbing with sulphate of copper or by using copper ionization.

Jequiritol as a means of producing a violent chemical irritation is most useful, and excellent results are seen from it. X-rays have been largely employed, but their effect is uncertain, probably due to the difficulty of regulating the dosage; but Collins has seen no bad results. He had not seen much good result from the use of radium. *Grattage*, whether carried out with a hair brush, a spiked instrument, or a knife

blade, acts by causing the development of fibrous tissue. Rapid cures should be regarded with suspicion; in Collins' opinion, it always takes from several months to several years to effect a cure, and then all follicular enlargement should have disappeared. The upper retrotarsal fold should be particularly examined.

It should be remembered that under various conditions follicles may develop which are not trachomatous. They are seen after the prolonged use of atropine or eserine, in children with a general tendency to adenoid formation, and in many cases of muco-purulent ophthalmia, and in these latter cases time only will tell the true nature of the follicles. Tubercle and pemphigus may produce scarring exactly like trachoma. Spring catarrh shows a remarkable development of eosinophiles, while it produces no contraction and leaves little if any sign of its former presence.

Discussion on the Diagnostic Values of Ophthalmoplegia, Partial and Total.

J. S. RISIEN RUSSELL. *British Medical Journal*, 29th October, 1910.

Risien Russell, of London, at the annual meeting of the British Medical Association in London, opened the discussion upon the diagnostic values of ophthalmoplegias. His remarks are worthy of careful study, bearing, as they do, upon a class of defect which is frequently forced upon the attention of ophthalmic surgeons. The speaker regarded paralysis of any ocular muscle, or group of muscles, as a certain sign of organic disease. But care must be taken that the deviation is really due to paralysis and not to spasm such as is common in the nystagmus of Thomsen's disease. Paralysis of an eye muscle not only postulates an organic lesion, but excludes many varieties of organic disorders of the nervous system, among them diphtheritic paralysis in which ophthalmoplegia externa is not found.

The mode of onset of paralysis is no reliable guide to the underlying disease. In insular sclerosis, paralysis is often sudden in onset, and may be transient in nature.

It is doubtful whether we can rely upon the significance of certain groups of ocular paralysis in the localization of the causal lesion in the medulla.

The speaker asked whether the phenomenon of reflex iridoplegia can be held to be pathognomonic of the parasyphilitic affections and general paralysis.

In the discussion which followed, Farquhar Buzzard, of London, said that the importance of the Argyll-Robertson pupil in the diagnosis of syphilitic and parasyphilitic disease could hardly be over-estimated. He emphasized the fact that the abolition of the light reflex, either unilaterally or bilaterally, often meant that there was a lesion of the third ventricle. When the sign was added to the classical signs of cerebral tumor, it was useless to operate, for the growth would be found to

be too deeply seated for removal. Bishop Harman, of London, said that extreme cold often caused paralysis of a rectus comparable to Bell's palsy. This might rapidly disappear. The president (C. Higgens) agreed with the speaker.

Acute Unilateral Ophthalmomalacia Anophthalmos in a Case of Basedow's Disease of Ten Years' Duration. (Ophthalmomalacie et enophtalmic monolatérales aigues dans une maladie de Basedow datant de dix ans.)

M. CHESNEAU. *Annales d'Oculistique*, May, 1910.

Chesneau's patient, a woman aged 58, first developed symptoms of exophthalmic goitre in 1898 when they were rapidly relieved by treatment with salicylate of soda. In 1901 she had a relapse, and her vision was reduced in both eyes, owing to sclerosis of the lenses. The general symptoms again yielded to treatment, but the exophthalmos remained uninfluenced. In February, 1908, the exophthalmos was unaltered, and the cataract was getting worse, but the general symptoms were slight. There was no alteration noticed in the condition from that date until January, 1910, when the patient suddenly developed feebleness in the legs, with severe vertigo. At the same time she suffered from painful photopsia and a dense mist in front of her right eye, which diminished in size, and fell back rapidly into its place in the orbit. This history was confirmed by careful enquiries. When seen by Chesneau two days later, the left eyeball was still prominent, but the right had not only receded to its normal position, but even appeared to have sunk into the orbit, while the palpebral aperture seemed visibly narrowed. The tension was so reduced that the eye felt like a slack pocket, but it retained its spherical shape. The pupil was somewhat smaller than that of the left eye and was inactive to direct stimulation but active consensually. The vision was reduced to hand-movements, and ophthalmoscopic examination was impossible owing to the cataract. There was no fundus reflex in either eye, and both irides were tremulous. Treatment by Faradization caused temporary improvement in the tension, but, finally, the eye settled down in the following condition. Position apparently normal, lids open normally, palpebral aperture slightly enlarged by five per cent cocaine, globe soft with normal movements, pupil inactive, size 2.5 mm. reduced to 1.5 mm. in twenty minutes by a drop of two per cent solution of pilocarpine nitrate, increased by atropine to 5 mm. only, which was the mean diameter of the right pupil: Graefe's sign not marked, sensation of skin and cornea normal, no hyperaemia, no difference in temperature in conjunctival *cults-de-sac* on the two sides, no difference in color on two sides of the face, and no pain on pressure over the supra-or infra-orbital nerves.

The author comments on the resemblance between the symptoms of his case and those of Horner's syndrome (narrowing of the pupil and palpebral aperture, retraction of the eyeball, diminished tension, and

visual trouble, conjunctival hyperaemia, and lacrymal hypersecretion) which is admitted to be due to paralysis of the cervical sympathetic, and refers to some cases of exophthalmic goitre with unilateral symptoms. He discusses the possible explanations of the sudden disappearance of the proptosis, and expresses the opinion that the protrusion is caused by the action of the muscle fibres in the check ligaments rather than by excess of fluid in the orbit, and that its sudden disappearances were due to interference with their innervation from the sympathetic.

PEDIATRICS

Edited by Henry L. K. Shaw, M. D.

Observations on Three Hundred Cases of Acute Meningitis in Young Children and Infants.

L. EMMETT HOLT. *American Journal of Diseases of Children (Volume 1), January, 1911.*

The observations relate to 300 cases mostly under three years of age seen at the Babies' Hospital, New York. Lumbar punctures were made in one hundred and ninety-seven of these cases.

Nearly one thousand lumbar punctures have been made at the hospital and no accidents have occurred and there have been no alarming symptoms and no case of infection. The writer believes that lumbar punctures has placed the diagnosis of meningitis on a new basis and that it is as important an advance in this group of diseases as was the adoption of throat cultures in diphtheria and other throat affections.

Apart from epidemics of cerebrospinal meningitis, seventy per cent. of the cases of acute meningitis in children were tuberculous. The tubercle bacilli were always present in the cerebrospinal fluid although difficult to find in the early stages.

The von Pirquet test gave positive results in most cases. The course of this form of meningitis is rarely over five weeks and it seems to be more prevalent in March and April.

Dr. Holt believes the cases of tuberculous meningitis have their origin in exposures to adults with pulmonary tuberculosis.

Tuberculous meningitis usually occurs as an early manifestation of a general tuberculosis and causes death before the lesions elsewhere are far enough advanced to give definite signs or symptoms. Pulmonary lesions were present in nearly all the cases.

Influenzal meningitis is frequently seen and resembles the cerebrospinal form and is almost invariable fatal.

Pneumococcus meningitis occurs usually in younger patients and is associated with pneumonia and is always fatal.

Streptococcus and staphylococcus meningitis are very rare forms in childhood. They seldom follow mastoid diseases. They may occur in the new-born and are often associated with spina bifida.

Meningococcus meningitis is the only variety in which at present there may be said to be any hope of recovery. This has been accomplished by the serum treatment.

GYNECOLOGY

Edited by John A. Sampson, M. D.

Torsion of the Fallopian Tube as a Factor in the Etiology of Hematosalpinx Apart from Ectopic Pregnancy.

A. L. McILROY. *The Journal of Obstetrics and Gynecology of the British Empire*, December, 1910.

The writer reports a case and reviews the literature of hematosalpinx and torsion of the tube.

The writer's patient was 46 years of age. She had a sudden attack of pain in the left iliac region associated with cold sweats and some collapse. There was no uterine hemorrhage, vomiting or marked constipation. On examination five days later a mass about the size of an orange was palpated which was immovable, tender and incorporated with the uterus, the latter was retroflexed. At operation, a few days later, the uterus was found enlarged, retroflexed and posterior to it was a soft mass, deep red in color and adherent to the uterus and sigmoid. This mass proved to be a left hematosalpinx with two complete twists of its uterine end. The tube was removed and the uterus was suspended to the abdominal wall. The tube was distended with a retort-shaped blood clot forming a tumor the size of an orange. No traces of chorionic villi could be found and the entire wall of the tube was infiltrated with blood.

The writer discusses the various causes of hematosalpinx, apart from torsion. The most frequent cause is tubal pregnancy; aside from this blood in the tube has been found in pregnancy, atresia of the genital canal, menstruation, inflammatory conditions and tumors of the tube and disorders of circulation.

From a review of the literature of torsion of the tube as a cause of hematosalpinx, he concludes that there is not any one definite cause for this, but when strangulation follows, there is an effusion of blood into the tissues of the tube. The exciting causes are mobility, changes in intra-abdominal pressure, and intestinal peristalsis.

PATHOLOGY AND BACTERIOLOGY

Edited by Thomas Ordway, M. D., and Harry S. Bernstein, M. D.

Blood Cultures in Pneumonia.

STRAUSE AND CLOUGH. *Johns Hopkins Hospital Bulletin*, Vol. XXI, No. 233, August, 1910.

The authors report a study of twenty-five cases of pneumonia with a view to determine if the disease is a general infection.

Of the twenty-five cases studied, fourteen were positive. Of these, five were fatal cases. In seven of the positive cases, a second culture, taken after the crisis, or during lysis, was negative. In the eleven negative cases, four cultures were taken on day of crisis, and three the day before the crisis. Ordinary liquid media were used in all cases, in both tubes and flasks, and in only two cases were agar plates employed; and of these, one was positive and one negative. In the positive series of cases, growth was obtained in cultures in the dilution of 1:10 and 1:30.

also in a few cases in a dilution of 1:5 and 1:75. Milk tubes showed no growth in two cases; Wien's special medium (ten per cent. peptone and two per cent. glucose water) was also negative in two cases. Plain broth showed growth in seven cases out of nine and glucose broth in ten cases in which it was used. When a growth appeared in a culture it was transferred to blood agar slant; this was done in every case before any negative report was rendered.

Conclusions.—Positive cultures were obtained in fifty-six per cent. of cases of pneumonia with a mortality of twenty per cent. The organisms are easily obtained.

Prochaska, in Zurich, 1901-1902, obtained positive cultures in 100 per cent. of forty cases; two cases were positive one day after crisis and one case positive two days after crisis.

Rosenau, in Chicago, obtained ninety-one per cent. positive in 175 cases.

Kinsig, 1904, in Chicago, made parallel series of cultures—series No. 1, using 8-9 c. c. of blood in 50 c.c. of bouillon; growth was obtained in twelve per cent. Series No. 2, dilution of 1:15 and 1:20, growth in seventy-six per cent.

Schottmuller, Hamburg, 1905, reports twenty-three per cent of positive cases in series of 209 cases. One was positive on day of crisis. He obtained growth only in seven cases and regards a positive culture a bad prognostic sign.

Cole, in 1900-1901, thirty per cent. positive cases (thirty cases in series).

Wolf, 1906, emphasized the presence of organism in circulating blood after crisis. In sixteen positive cases before crisis, six were positive after crisis. Three positive in uncomplicated cases eight hours after crisis, three positive in delayed resolution, seven, sixteen, and seventeen days after fall in temperature. One positive one day and one two days after normal temperature. One positive three days before temperature became normal.

Wiens, in Breslau, 1908, reports series of thirty-three cases, seventy-nine per cent. positive. Several cases were positive during fall of temperature, at beginning of crisis or lysis; and one case positive one day after crisis, two positive the day before crisis. He concludes bacteriæmia is constant in pneumonia if proper fluid is used and positive blood cultures are of no prognostic value. Failure to obtain organisms is due to technical difficulties and in part to other factors. The other factor (which Wiens alludes to) includes an uncertain viability of the pneumococcus.

Rosonow demonstrated organisms in smears from the blood of pneumonia patients from whom he could not isolate it by cultural methods, although the pneumococci generally disappeared from the blood after crisis. Virulent organisms may be demonstrated in some cases after the temperature has become normal. Animal inoculation shows that the result of infection is the balance between the forces of invader and antibodies of host, although all these may be present, as shown by Mancini by the deviation of the complement.

Crisis or lysis occurs when the cause of disease is overpowered by the resisting forms of the body without implying the death of the pneumococci. It is not difficult to conceive that the pneumococci are present in the blood, but not always in a condition to grow on artificial media.

ALBANY MEDICAL ANNALS

Original Communications

BENDER HYGIENIC LABORATORY.

REPORT OF THE DIRECTOR FOR THE TWO YEARS ENDING AUGUST
31, 1911.

BY THOMAS ORDWAY, M. D.

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To the Trustees of the Bender Hygienic Laboratory:

GENTLEMEN.—I have the honor to submit my report for the two years ending August 31, 1911.

I. THE WORK OF THE LABORATORY.

The work of the laboratory may be conveniently considered under two headings—the routine examination of specimens, and the teaching, the latter including the investigation of special problems.

A. Routine Examination of Specimens.—The routine examinations are summarized in the following tables:

TABLE I.
ROUTINE EXAMINATIONS MADE AT THE BENDER HYGIENIC LABORATORY
FROM SEPTEMBER 1, 1908 TO AUGUST 31, 1909.

	Albany Hos-pital	St. Peter's Hos-pital	Child's Hos-pital and St. Mar-garet's House	State Dept. of Health	City Dept. of Health	All other sources	Total
General bacteriological and clinico-pathological examinations.....	304	98	4	3711	1360	330	5906
Surgical specimens.....	1066	529	22	.....	.....	105	1722
Post-mortem examinations....	10	5	14	.....	.....	104	142
Total.....	1479	632	40	3711	1360	530	7770

TABLE II.
ROUTINE EXAMINATIONS MADE AT THE BENDER HYGIENIC LABORATORY
FROM SEPTEMBER 1, 1909 TO AUGUST 31, 1910.

	Albany Hos-pital	St. Peter's Hos-pital	Child's Hos-pital and St. Mar-garet's House	State Dept. of Health	City Dept. of Health	All other sources	Total
General bacteriological and clinico-pathological examinations.....	*1713	75	66	†1074	2558	205	6681
Surgical specimens.....	1174	579	28	3	1	208	1903
Post-mortem examinations....	29	3	16	.....	.....	†55	103
Totals.....	2016	657	110	1077	2550	558	8777

*Corrected total number of specimens examined

* 1005 should be subtracted from the bacteriological examinations under heading of Albany Hospital, as this diagnostic work, chiefly for Pavilion G, is also counted under City Health Department.

† For coroners' physicians, 30.

‡ On account of the change in the work done for the State Department of Health, 1737 less of these diagnostic examinations were made than in the year 1908-1909, see pages 76 and 77.

TABLE III.

ROUTINE EXAMINATIONS MADE AT THE BENDER HYGIENIC LABORATORY
FROM SEPTEMBER 1, 1910 TO AUGUST 31, 1911.

	Albany Hospital	St. Peter's Hospital	Child's Hospital and St. Margaret's House	State Dept. of Health	City Dept. of Health	All other sources	Total
General bacteriological and clinico-pathological examinations.....	*1640	119	32	†1280	2145	825	6541
Surgical specimens.....	1190	670	31	8	1	416	2316
Post-mortem examinations.....	26	4	10	.....	.....	61	101
Totals.....	2856	793	73	1288	2146	1302	8458
*Corrected total number of specimens examined							7468

* 900 should be subtracted from the bacteriological examinations under the heading of the Albany Hospital, as this diagnostic work, chiefly for Pavilion G, is also counted under the City Department of Health.

† On account of the change in the work done for the State Department of Health, 604 less of these diagnostic examinations were made than in 1909-1910. See page 66.

TABLE IV.

ROUTINE EXAMINATIONS FOR THE PAST THREE YEARS.

	1908-09	1909-10	1910-11	
Surgical specimens.....	1722	1993	2316	
Post-mortem examinations.....	139	103	101	
General bacteriological and clinico-pathological examinations.....	2195	3612	3771	State work subtracted.
	5906	5586	5051	State work included.

Including *special tests* among which are the following requiring far greater amount of time and care than the examinations tabulated above.†

Inoculation tests.....	*	*57	104	
Wassermann-Noguchi tests.....	○	77	365	
Blood cultures.....	—	44	50	
Vaccines prepared.....	—	8	21	
Milk and water examinations.....	—	24	44	
Total.....	—	210	593	

* No record of such special examinations before January, 1910 is available; so these figures for 1909-10 are calculated on the basis of eight months.

† See page 68.

Character of work, including remarks on interesting and unusual cases.—In these routine examinations, numerous rare conditions have been encountered and also cases in which the laboratory diagnosis has been of value in determining the true condition existing, and has indicated the treatment to be adopted or shown the probable outcome of the disease. These examinations will be considered under three general headings—(1) general bacteriological and clinico-pathological examinations; (2) surgical specimens; (3) post-mortem examinations.

General bacteriological, and clinico-pathological examinations.—In 1909-10 there were 320 less than in 1908-09, and in 1910-11 there were 534 less than in 1909-10. It is very surprising that this decrease was so small when we consider the change in the work done for the State Department of Health¹ by which approximately 2,431 diagnostic examinations had been gradually transferred to the State Hygienic Laboratory. The majority of such examinations are simple procedures, consisting of the examination of stained smears, a number of which can be made at one time. Notwithstanding this change the number of general bacteriological and clinico-pathological examinations has remained practically uniform, indicating a great increase (about 2,000) from other sources to make up for this deficiency. These figures, however, give little indication of this increased amount of work, for the examinations of the past two years have included not only the routine examination of smears and cultures, but a large number of special examinations such as inoculation tests for suspected tuberculosis, the only method of absolute diagnosis in many cases, and therefore essential for proper treatment, many Wassermann-Noguchi and Conradi tests, preparation of vaccines, blood cultures, milk, water and other examinations requiring much time and care.²

Among the more interesting or unusual infections encountered during the past two years, we have received material from cases of malignant edema and gas bacillus infection, numerous cases of meningitis of tuberculous, meningococcus, and pneumococcus origin. The frequent occurrence of the latter complicating lobar pneumonia is noteworthy and it is encouraging to record that two of the cases of pneumococcus meningitis, usually considered

¹ See pp. 76 and 77.

² See p. 67, table IV.

fatal, have entirely recovered. The very early diagnosis, second to third day, of a case of acute anterior poliomyelitis of the cerebral type, with symptoms of cortical irritation, was made by exclusion on laboratory findings before the onset of paralysis.

From ulcerative stomatitis complicating typhoid, and in a case of rapid wide-spreading buccal necrosis in pneumonia, in children, fusiform bacilli and spirochaeta, in varying proportion, were obtained in large numbers, and also from several cases of so-called "Vincent's Angina."

The finding of the mycelia made certain the diagnosis of an unusual number of cases of pharyngo-mycosis and one case of atypical tinea tonsurans.

Among the more interesting blood cultures are several in which colon and typhoid bacilli, pneumococci, streptococci and staphylococci have been obtained. Colon bacilli were isolated from the circulating blood in a case of post-partum sepsis and although the symptoms were alarming, the good prognosis was substantiated by the favorable outcome. In an atypical case of pneumonia, practically without physical signs, the diagnosis was cleared up by obtaining pneumococci from the blood. In several of the cases of puerperal infection in which staphylococci have been found in the blood the outcome has been fatal; indeed, the prognosis has been fully as grave, if not more so, as in similar infections of streptococcal origin. The importance of urinary cultures in general infections to supplement the blood cultures, as pointed out by Dr. John A. Sampson, seems to have been confirmed by our experience during the past two years.

Numerous cases of clinically obscure fever were proved by agglutination and cultivation tests to be of para-typhoid origin. In an unusual case of ambulatory typhoid the diagnosis was made positive by the isolation of typhoid bacilli from the blood during a recrudescence. While in another puzzling and protracted case, typhoid bacilli were obtained from the blood, during a relapse, three months after the onset of the disease. In three cases typhoid bacilli, identified by cultivation, agglutination and fermentation tests, have been recovered from curettings of periosteum and from the centre of gall stones one, two and five years respectively, after an attack of typhoid fever.

The more interesting cases examined by the Wassermann-

Noguchi method for syphilis have been elsewhere described by Dr. H. S. Bernstein.³

Examinations of certified milk have been made without charge for the Milk Commission of the Medical Society of the county of Albany at frequent intervals and it is a pleasure to note that the bacterial content, even in very hot weather, has always been well within the legal requirements for such milk.

Surgical Specimens.—The number of surgical specimens examined has increased from 1,722, during 1908-09, to 1,993 in 1909-10—an increase of 271 specimens. While in the year 1910-11 the number was 2,316, an increase of 323 during the year or a total increase of 594 specimens during the past two years. It is interesting to note that this increase alone is equal to approximately one-half of the total number of surgical specimens (1,268), examined in 1910-11 at one of the largest and most active of the pathological laboratories in eastern United States and that the number at the Bender Hygienic Laboratory for the past year (2,316) is almost twice that examined by the laboratory above referred to for a like period. This large number is all the more significant when it is understood that *every* specimen is described in gross, that portions are fixed and then embedded in celloidin and permanent sections made for the purpose of diagnosis and record; and that in many cases other fixatives, paraffin sections and special stains are also made to further this purpose.

This large number of specimens examined apparently indicates not only the greater number of surgical operations performed but the increasing realization of the practical value of such laboratory examinations to surgeons for diagnosis, prognosis, and for protection, in ways similar to the uses of the X-rays. Although these aids have been employed generally by the best surgeons for a number of years, it is a fact more and more often realized by the laity who are demanding such examinations as a control. The conscientious surgeon, as well, desires these controls to work performed in a careful and accurate manner.

In the wide range of interesting or unusual surgical specimens examined were several vermiform appendices showing carci-

³ Bernstein, H. S., The Serum Diagnosis of Syphilis, *Albany Medical Annals*, October, 1910.

noma (4), oxyuris vermicularis (4), and multiple miliary diverticula (3). Three cases of actinomycosis have been encountered, in one the condition was suspected clinically, while in the other two the diagnosis was made by the laboratory findings, the principal seats of infection were the side of the neck, the tongue and the abdominal wall.

Sarcosporidiosis was found in beef submitted for examination. There were also specimens of huge retroperitoneal lipomata, a uterus with twin pregnancy and acute hydramnios, four pregnant uteri, single and twin, associated with large uterine leiomyomata; several cases of large chronic granulating and ulcerating areas, particularly of hands and legs, clinically resembling indolent ulcers, were proved by histological and biological tests to be tuberculosis, syphilis, or carcinoma, respectively.

There were many other interesting and unusual cases of syphilis, tuberculosis and tumors; particularly noteworthy are several of the breast, genitalia and thyroid. A rare tumor of the thyroid, clinically malignant, has the microscopic appearance of typical carcinoma and sarcoma,⁴ while another, clinically benign, presented histologically the characteristics of a malignant tumor.

There have been a large number of tumors characterized by cells resembling those found in lymphatic structures. These may be referred to by the general term of lymphoblastomata and are often spoken of by such terms as lymphoma, malignant lymphoma, lymphocytoma, pseudo-leukemia, aleukemic leukemia, small and large round cell sarcoma, or Hodgkin's disease, the name depending upon the observer, and the variety of the predominating and associated cells. This class contains many tumors of the border line variety, such as are often found in the prostate, breast and elsewhere, and frequently illustrate the limitations of histological diagnosis.

These tumors show gradations from richly cellular structures with many mitoses to a relatively small number of lymphoid elements, abundant stroma, eosinophils, multinucleated cells; the so-called Reed type of Hodgkin's disease. The clinical course, however, does not seem to bear any absolute relation to the histology. The course is most varied, frequently very long in tumors appearing most malignant histologically. Retrogres-

* Diagnosis confirmed by Dr. F. B. Mallory of Boston.

sions in this class may not infrequently occur, whether spontaneously or as a result of treatment it is yet impossible to state. Further work, combining the clinical and laboratory study of such tumors should prove of value, not only in showing new facts about the lymphoblastomata and their relation to leukemia, but in shedding additional light on tumors in general.

Post-mortem Examinations.—The number of post-mortem examinations is somewhat less than in former years, the percentage of such examinations at the hospitals is very much smaller than at most hospitals of similar size where a high standard of work is maintained. The decrease may also in part be explained by the fact that the laboratory has not felt justified in making post-mortem examinations at great expense of time, labor, and supplies for the Coroners' physicians who have for years received the entire pay for such work performed by the laboratory. Exception has been made only in particularly important cases and in instances in which material or knowledge of technique might become available for teaching. The facilities provided for careful post-mortem work are entirely inadequate and compare unfavorably with those in other cities.⁵

Among the more unusual post-mortem examinations were cases of so-called "pancreatic apoplexy," Banti's disease, chorioepithelioma with metastases, splenomegaly with blood picture of primary anemia, multiple cystic disease of liver and kidneys, primary carcinoma of lung and pleura and muscular hypertrophy of the pylorus.

The abundance and variety of general bacteriological, clinico-pathological and surgical specimens, and the post-mortem examinations may be seen from these examples—which include but few of the interesting and unusual pathological conditions encountered at the laboratory during the past two years.

II. TEACHING.

The laboratory teaching includes undergraduate instruction of medical students and qualified special students, the training of assistants for future laboratory or clinical work, and the investigation of problems related to general medical or biological subjects.

⁵ Gradwohl, R. B., The Office of Coroner, *Jour. Am. Med. Assoc.*, March 12, 1910, p. 842.

Laboratory Courses.—The systematic courses of study for undergraduates of the Albany Medical College for the years 1909-10 and 1910-11 were as follows:

TABLE V.

Course.	No. hrs. per wk.	Given in 1909-10 by	Given in 1910-11 by
1. Normal Histology.....	6	Drs. Beilby, Douglas and Lawrence	Drs. Bernstein and Jenkins
2. Experimental Physiology (1st year)	2	Dr. Becker	Dr. Myers
3. Experimental Physiology (2nd year)	5 (1st half year)	Dr. Myers	Dr. Myers
4. Pathology and Bacteriology	8	Drs. Ordway, Bernstein and Riley	Drs. Ordway, Bernstein and Kellert
5. Anatomy and Pathology of the Nervous System	2½	Dr. Archambault	Dr. Archambault
6. Surgical Pathology.....	2½	Drs. Beilby and Fromm	Dr. Beilby
7. Clinical Microscopy.....	2½	Drs. Hawn and Sawyer	Drs. Hawn and Sawyer
8. Histology and Pathology in connection with Course in Obstetrics	2½	Drs. Lipes, Lawrence and Fromm	Dr. Lipes

These courses were conducted during the year 1909-10 in general as in previous years. In 1910-11 there were numerous changes which will be subsequently referred to.⁶

Research and Special Students.—The steady increase in the routine and the large amount of time spent in organization and teaching have interfered greatly with the research work. Numerous investigations, however, have been continued or undertaken. The serial arrangement in the new slide cabinet⁷ of the microscopic slides collected during the past fifteen years has now made this large amount of surgical material, with detailed records, available for study from morphological, statistical, diagnostic and prognostic points of view.

A number of physicians have availed themselves of opportunity to work in the laboratory. Dr. John A. Sampson, of Albany, has continued his work on the blood supply of the female pelvic organs in normal and pathological conditions.⁸ Dr. C. W. L. Hacker, of Albany, has, during the past year, acted as

⁶ See pages 79 to 81.

⁷ See page 83.

⁸ See page 76.

volunteer assistant in the course in pathology and has devoted himself earnestly to demonstrating and quizzing on gross pathology. I am very much indebted to him for this help. Dr. Hacker has also spent a large amount of time in studying the minute anatomy of the vermiciform appendix, with special reference to the so-called retrograde processes and chronic inflammations in tissues freshly fixed and stained for histological detail.

Dr. Paul T. Harper, of Albany, worked in the laboratory during the first half of 1909-10, helping in the arrangement and classification of teaching material, and studying a special problem.

Dr. E. McD. Stanton, of Schenectady, N. Y., and Dr. Strobel, of Rutland, Vermont, have made statistical examination of the records of the past fifteen years; the former with reference to the occurrence of surgical renal and ureteral affections, in routine post-mortem examinations; and the latter to ascertain how frequently enlarged axillary glands occurred in the routine specimens from operation of cancer of the breast, of those enlarged to determine what percentage showed metastatic carcinoma and in what proportion the enlargement was due to simple hyperplasia and chronic inflammatory changes.

Dr. Ellis Kellert has assisted me in, and will continue the study of, typhoid-like disease in rabbits from clinical and pathological points of view with special reference to the natural history of the disease and the value of prophylactic vaccination.

Special lines of study have been pursued by Dr. F. J. Resegue and Dr. A. S. Downs, of Saratoga Springs, and Mr. Thomas Clifford, of New York City.

The following undergraduate students have spent a varying amount of time in the laboratory during the summer vacations and have assisted in the routine or been interested in special work—Messrs. Koundourianes, Lenz, Valovic, Auringer, E. B. Hull and A. J. Hull of the Albany Medical College.

Five laboratory assistants with training of from five months to a year have secured positions with income varying from \$1,200.00 to \$2,000.00. There have been numerous other applications for laboratory assistants. This laboratory pays its assistants very small salaries but the experience and training should qualify them for positions as above indicated.

During the past two years the following articles have been published:

1. Bernstein, H. S.—The Serum Diagnosis of Syphilis, *Albany Medical Annals*, October, 1910.
2. Syllabus of Methods of Diagnosis (excepting diseases, the digestive system, and sphygmomanometry) demonstrated at the meeting of the Third District Branch of the New York State Medical Society, Albany, October, 1910, by Drs. Hawn, Douglas, Archambault, Fromm, Bernstein, Kellert and Myers.
3. Myers, Victor C.—Toxemias of Intestinal Origin. *Albany Medical Annals*, January, 1910.
4. Myers, Victor C.—Physiology and Pathology of Creatinine and Creatine. *American Journal of Medical Sciences*, February, 1910.
5. Myers, Victor C.—On the Salts of Cytosine, Thymine, and Uracil. *Journal of Biological Chemistry*, March, 1910, VII, pp. 249-258.
6. Myers, Victor C.—(With LaFayette Mendel of Yale University).—The Metabolism of Some Pyrimidine Derivatives. *American Journal of Physiology*, April, 1910, XXVI, pp. 77-105.
7. Ordway, Thomas—Chronic Pancreatitis with Tumor-like Nodules in the Cat. *Journal of Medical Research*, October, 1909, Vol. XXI, No. 3, p. 451.
8. Ordway, Thomas, with Tyzzer, E. E.—Tumors in the Common Fowl. *Journal of Medical Research*, October, 1909, Vol. XXI, No. 3, p. 459.
9. Ordway, Thomas—On the Teaching of Pathology by the Case System, Supplemented by Gross and Microscopic Specimens. *Boston Medical and Surgical Journal*, June 9, 1910.
10. Ordway, Thomas—Limitations of Laboratory Diagnosis. *Albany Medical Annals*, October, 1910.
11. Ordway, Thomas—Angina Pectoris and Disease of the Coronary Arteries—A Discussion. *Albany Medical Annals*, August, 1911, p. 478.
12. Ordway, Thomas—Medicine in China. *Albany Medical Annals*, August, 1911, p. 481.
13. Ordway, Thomas, with Bedell, A. J.—Chloroma. (In Press.)

14. Ordway, Thomas, with Shaw, H. L. K.—Muscular Hypertrophy of the Pylorus in Infancy. *American Journal of Diseases of Children*, September, 1911, Vol. II, p. 159.
15. Sampson, J. A.—The Participation of the Tissues Adjacent to the Uterus and of the Pelvic Lymphatics in Uterine Cancer. *Journal of American Medical Association*, January 14, 1911, p. 106.
16. Sampson, J. A.—Intramural Abscess of the Puerperal Uterus. *American Journal of Obstetrics*, Vol. 61, No. 3, 1910.
17. Sampson, John A.—The Blood Supply of Uterine Myomata—Abstract. *Journal American Medical Association*, Vol. LVI, No. 25, June 24, 1911, p. 1913.
18. Archambault, LaSalle—A Contribution to the Anatomy and Pathogeny of Agenesis of the Corpus Callosum. *Albany Medical Annals*, September, 1911, p. 513.

In addition to the above, numerous investigations have been started and several are nearing completion. A detailed reference to these, however, will be reserved for a subsequent laboratory report.

II. CHANGES DURING THE PAST TWO YEARS.

Routine.—Until January, 1910, there were few important changes in the character of the routine work other than in the organization of the staff and the adoption of such newer methods (to be referred to later) as had been found to be of practical clinical value. Since that time the State Department of Health has taken over the work of routine examinations formerly done by us. Instead of this work, the Bender Laboratory has furnished instruction to health officers in conjunction with the State Department of Health and has made such miscellaneous bacteriological and pathological examinations as have been requested by the Director of the State Hygienic Laboratory. In the absence of the Director of the State Laboratory on official business, the advice of the Bender Laboratory has been frequently sought, so that the latter may be regarded not only as consulting expert in clinico-pathological lines, but a supplementary laboratory for emergency use; regarding the latter should be mentioned the fact that

during the absence of the State bacteriologist, on several occasions, the routine examinations have been carried on at the Bender Laboratory without any interruption and on very short notice. A special instance of this was during the summer and fall of 1911 when, on the occurrence of cholera at the port of New York, the State Department of Health rendered prompt aid by sending the greater part of its laboratory staff and much equipment to New York City in the course of a few hours. Meanwhile, on fifteen minutes' notice, the routine was transferred to the Bender Laboratory. Because of the mutual understanding and co-operation, there was not the slightest interruption in making the daily diagnostic examinations and in sending out the reports.

Aside from the work performed under the city and State contracts, all diagnostic examinations have been made *for* and *reports* returned *to physicians*. It has seemed best to have such a limitation not only because the laity are as yet in no position to appreciate or interpret the laboratory findings, but on the ground of medical ethics.

During the past two years such newer methods, as have been found to be of value in the test of time have been adopted, among these are the early diagnosis of typhoid by the Conradi method, which efficiently supplements the Widal reaction, the isolation of typhoid and paratyphoid bacilli from the stools and urine by newer cultural tests, for diagnosis in special cases, and particularly for detecting so-called "typhoid carriers," the diagnosis of syphilis by the Noguchi modification of the Wasserman test and by the examination of fresh material by dark ground illumination.

The control of this routine has been very greatly facilitated by the establishment of a system of records similar to that used by Dr. F. B. Mallory in the pathological department of the Boston City Hospital, and the new form of report blank should be of value to physicians in the interpretation of the laboratory findings.

Organization.—The most important accomplishment during the past two years, has been, I believe, so to train the assistants and the other laboratory helpers that at least two persons are able to fill each position; so that in case of absence from sickness, vacation or retirement, such a vacancy could be "auto-

matically" filled by the "next in rank." This has been successfully done for all positions—director, first, second, third, fourth assistants, technician, stenographer, janitor and helper. This has been made possible owing to the financial support of Doctors Albert Vander Veer, Willis G. Macdonald, Arthur W. Elting, John A. Sampson and the Albany Medical College; because of this co-operation I have been enabled to secure as first assistant Dr. H. S. Bernstein of Harvard (recently of the Boston City Hospital) and to obtain suitable technical and janitor service. By thus having the advantage of efficient aid it has been possible to train the other assistants and laboratory helpers and carry on an orderly routine.

Other Changes in the Staff.—Dr. S. B. Wolbach left in June, 1909, to take charge of the Pathological Department of the Montreal General Hospital. Dr. H. C. Jackson, whose collaboration and interest in the work of the laboratory had been most helpful to the directors, resigned in June, 1909, to become Professor of Physiology at the University and Bellevue Hospital Medical College; Dr. Victor Myers (Yale, Ph. D., 1909) assumed his work here.

Dr. L. H. Gaus resigned in the summer of 1909 to become Director of the Steuben County Laboratory at Corning, New York, and Dr. R. C. Keigher (the pathological house officer) resigned in the summer of 1909 to enter private practice in Schenectady, New York. Dr. W. D. Ayer (Albany Medical College, 1910) was appointed to this position July 1, 1911.

Dr. M. D. Cronin (Albany Medical College, 1907) resigned September 1, 1909, to enter private practice in Albany, and Dr. E. J. Riley (Albany Medical College, 1908) was appointed to this position. He resigned in September, 1910, to become instructor in pathology in the University and Bellevue Hospital Medical School, and his place was taken by Dr. Ellis Kellert (Albany Medical College, 1909).

Dr. T. Saiki resigned September 1, 1909, to complete research work with Professor Mendell at Yale and to continue later his studies in Europe. His place was taken by Dr. W. A. Bing (Albany Medical College, 1909) who resigned February 1, 1910, to accept the position of Bacteriologist in the State Hygienic Laboratory. His position was filled by Dr. W. E. Lundblad (Albany Medical College, 1910) who resigned November 1,

1910, to become Director of the Steuben County Laboratory at Corning, N. Y. Dr. C. D. Partridge (Johns Hopkins Medical School, 1908) assumed this position, resigning September 1, 1911, to become Professor of Bacteriology and Pathology at the University of Georgia. Dr. W. D. Allen (Albany Medical College, 1910) was appointed August 1, 1911, to fill this position.

Teaching.—Numerous changes have been made in the teaching,—in the personnel, method and equipment. The former has been indicated on page 73, Table V. The more important changes in method and equipment are as follows:

Course 1. Normal Histology.—It has seemed logical to give instruction in embryology in the first year with the work in histology, for at this time the students are taught the structure and forms of cells, combinations of cells, or tissue, and organs. Now, cell growth, reproduction and differentiation, as learned from the study of embryology, is of special value for the appreciation of the histological work and is necessary for any adequate conception of many phases of the work of the second year in pathology, particularly in the study of various anomalies and tumors. During the summer of 1910 material was secured and the following plan elaborated—Microscopic study of the starfish egg for early segmentation stages, gross and microscopic examination of a series of hens' eggs for the formation of germ layers, and the development of the nervous and vascular systems, and in a similar way the embryo of the pig for the development of the organs, the latter to be taken up again, according to the plan of Minot and Lewis,¹⁰ when each organ is studied histologically. This outline has been successfully used during the past year by Dr. H. S. Bernstein. Besides abundant new material, numerous "loan slides" have been prepared to illustrate special histological details—such as cell division.

All the microscopes purchased before 1910 have been thoroughly repaired and placed in the lockers in the class-room for use by the first-year students in histology.

Courses 2 and 3. Experimental Physiology.—Considerable equipment has been secured for use in these courses. A large cabinet has been built and conveniently placed in the lecture room; this contains instruments sufficient to demonstrate many

¹⁰ Stöhrs' Histology (arranged on an embryological basis by Lewis).

of the more important physiological experiments. Dr. Myers has also devoted a large amount of time and care to preparing a concise, systematic and practical syllabus, with references to collateral reading, for use in these courses.

Course 4. Pathology and Bacteriology.—The class has been divided into small sections, not only for attendance at post-mortem examinations (as in previous years) but for practical work in actual preparation of culture media, learning the use of dark ground illumination, the technique of cutting sections of tissue for microscopic study and other details of histological and bacteriological routine. This has also facilitated the practical exercises in the study of immunity, and in the observation and actual participation in so-called experimental pathology, including pyemia, typhoid, tuberculosis and diphtheria, the latter with relation to protection by antitoxin, etc. I believe such study of great value to second-year students in connection with their course in bacteriology and pathology, but think that many of the less striking procedures are of very doubtful value in the hands of the students, particularly in the second year, already so crowded that it is difficult for them to secure even a good working knowledge of the "essentials" of the subjects under consideration. A small room near the class laboratory has been refitted as a working museum, the specimens are arranged in chronological order, to permit expansion, and cross catalogued on an anatomical and pathological basis for ready reference. In connection with fresh material, this museum is of great value not only in the usual teaching but of particular advantage when the case system, supplemented by gross and microscopic specimens is used. This has been fully described in a previous publication.¹¹

A large number of reflectoscopic illustrations and many lantern slides have been provided to supplement the other teaching.

Course 5. Anatomy and Pathology of the Nervous System.—A varied supply of excellent material has been secured by Dr. Archambault, for gross and microscopic study by his class. Part of the new shelving in the museum is used for this gross material and a cabinet has been provided for the storing of the large sections of brain and brain stem.

¹¹ See page 75, publication number 6.

Course 6. Surgical Pathology.—During 1909-10,¹² as in former years, this course was given in the third year under the department of surgery. In 1910-11, it was transferred to the second year and the rating of the examination department was credited to the department of bacteriology and pathology.¹³ This change has resulted in entirely satisfactory attendance. The specimens from the working museum, above referred to, have been found useful in supplementing the fresh gross material in daily teaching and in practical examination.

Course 7. Clinical Microscopy.—Considerable new equipment for blood examinations has been provided, so that each student has a counting chamber and pipette and there is a hemoglobinometer for every two students. A large series of loan slides illustrating the common and unusual blood diseases have been prepared. Suitable cabinets with locks have been built, that the equipment may not be lost or injured. Drs. Hawn and Sawyer have prepared a concise and practical syllabus for the use of their students.

Course 8. Histology and Pathology in Connection with the Course in Obstetrics.—The character of this course has been somewhat altered during the past year, as it had seemed impossible for a busy practicing physician to give requisite time for the details of preparation and conduct of such a laboratory course. As laboratory work on the embryology, histology and pathology of the female genital system is taken up in courses 1 and 4 and 6, the hours of course 8 have been devoted, by Dr. Lipes, who has provided an excellent series of lantern slides, to lantern demonstrations on subjects related to the obstetrical work.

Not only have these special changes been of value in the various courses but the development of the organization and routine has made available for the medical students more individual instruction in small groups.¹⁴

Building and Equipment.—Many of the changes above referred to and others to be described may seem very trivial and out of place, but to show details clearly is the purpose of this report. In addition to the special equipment provided for these

¹² See Announcement of Albany Medical College, 1909-10.

¹³ See Announcement of Albany Medical College, 1910-11.

¹⁴ See page 80.

courses, there has been added a large amount of general laboratory equipment, and the numerous alterations and repairs to the building also are not only of direct value in the routine work of the laboratory but indirectly to many of the courses given here.

We are indebted to the trustees of the laboratory for many improvements and repairs. The wood work of the exterior, window sashes, doors, etc., has been painted, the seats in lecture room stained and additional stools provided for the class room. The curtains of the entire building have been renewed or rehung, glass doors with locks have been added to two of the record cases in the office and to the shelves in the director's room. The work bench in the technician's room has been widened and a doorway cut through between this room and that of the first assistant, where all of the pathological material is received and potted. Cupboards have been built under the sinks in the large media and sterilizing room, which are useful and add to the general neat appearance of the room. Rings have been set into the upper parts of the window sashes on the middle and upper floors, so that better ventilation may be obtained. Electric lights have been placed in the front hall, at the outside door, and in the supply room; and a door bell has been added to the front door.

The large animal cages in the basement have been relined with lead, and with care should last for years. A number of small cages have been provided, for the work of diagnosis, particularly in genito-urinary tuberculosis, has greatly increased.¹⁵

The urgent need of certain new equipment has now been supplied. A suitable centrifuge and a modern autoclave have been installed; by the use of the latter, blood serum for throat cultures, is inspissated and sterilized without transferring, with consequent saving of gas and time. Through the generosity of Mr. H. H. Bender we have secured an adequate refrigerator for the preservation of cultures, sera, material for inoculation, and pathological specimens.

We are indebted to Mr. T. E. Clifford, one of the special students, for an excellent sanitary cooler for drinking water. A large electric fan has greatly facilitated the evaporating of extracts for practical use in the diagnosis of syphilis. A new cabinet has been provided for the physiological apparatus and

¹⁵ See page 67, table IV

has been placed in the lecture room. Here also a permanent wall blackboard has been installed. In response to the request of the director for better fire protection, three large portable fire extinguishers have been purchased, the two old ones recharged, and all have been put in conspicuous places for emergency use.

Another freezing microtone (loaned by Dr. A. Vander Veer) has been placed in the class room for the students' use in connection with the "case teaching" in the course in pathology.

A mimeograph and an impression duplicating apparatus have been purchased; these are of value in preparing examination papers as well as laboratory instructions, including sketches of equipment and illustrative diagrams.

An excellent dark ground illuminating apparatus has been purchased, also double teaching oculars with pointers, which allow both student and instructor to look into the same microscope at one time; to point out details and for quizzing, these have been found very useful.

Fifty new microscopes and additional oil immersion lenses for use of the students, have been provided and one of the small rooms leading from the main class room has been fitted with shelves and locks to store them and arranged as a convenient supply room for material for current class use. An adjoining small room has been similarly fitted with cabinets with locks for safely and conveniently keeping the supplies for the course in clinical microscopy.

The stock room in the basement has been placed in charge of the janitor, all supplies received and those given out are recorded. All requests for supplies must be made before 10 A. M. A duplicate key board has been prepared and holds extra keys to all the doors, lockers, etc., of the entire building.

An excellent bag for use in connection with the postmortem examinations and additional instruments have been purchased.

Two large cabinets for microscope slides have been provided; one has been placed in a small room near the class laboratory for housing the large sections of nerve tissue prepared by Dr. Archambault, the other is in the office and in it are stored all the microscopic slides of the past fifteen years, serially arranged for rapid reference. A new chemical cabinet has been built for

the technician's room and two cases for books and special reagents of the assistants.

In a large general laboratory the waste in material and labor is very considerable; this may, however, be lessened by suitable housing, classification, and distribution of equipment and supplies. The numerous cabinets provided with locks are of great value for this purpose.

Many of the changes made in the building as well as the equipment procured during the past two years are indicated in the accompanying photographs. These changes add not only to the general appearance of the laboratory, but aid greatly in the efficiency of the work of routine and teaching.

Financial Status.—The work done by the staff of the Bender Hygienic Laboratory has been indicated above and may be conveniently grouped under four headings:

- I. General bacteriological and clinico-pathological examinations.
- II. Examination of surgical specimens.
- III. Post-mortem examinations.
- IV. Teaching.

Except for a small endowment, which covers the insurance and necessary repairs, the entire running expenses of the laboratory (including light, heat, power, telephone charges, office supplies, salaries, labor, chemicals and incidentals) are derived from this work which is done for the following institutions and individuals:

1. Albany Hospital.
2. St. Peter's Hospital.
3. Child's Hospital and St. Margaret's House.
4. State Department of Health.
5. City Department of Health.
6. Albany Medical College.
7. All other sources.

The financial management of the laboratory, as in previous years, has been divided between the Treasurer of the Board of Trustees, the Registrar of the Albany Medical College and the Director of the Laboratory. The following changes have oc-

curred in the income of the laboratory during the past two years:

The Governors of the Albany Hospital have recognized and appreciated the increase in the work done for the hospital and we are indebted to them for their ready co-operation in providing for the services of a laboratory assistant, to whom the hospital gives board and pays a salary of five hundred dollars a year.

Until February 1, 1910, by contract, the laboratory made routine examinations of sputum for tuberculosis, throat cultures for suspected diphtheria and blood for typhoid fever for the State Department of Health. Since this date the work has been changed as indicated on pages 76 and 77 and for this service the State Department of Health pays the laboratory \$2,000.00 a year instead of the \$2,500.00 in former years.

Since the death of Dr. Willis G. MacDonald in December, 1910, the laboratory has felt the loss of his kindly interest and co-operation and his financial assistance. For some years he had paid \$300.00 a year toward the salary of a laboratory assistant.

The Homeopathic Hospital paid \$100.00 during the past year for examination of miscellaneous bacteriological, clinico-pathological and surgical specimens.

Other than the above, there have been no important changes in the finances of the laboratory during the past two years.

The accounts are summarized as follows:

STATEMENT OF ACCOUNTS (FROM SEPTEMBER 1, 1909, TO SEPTEMBER 1, 1910).
Laboratory Earnings.

Balance on hand September 1, 1909.....	\$24 15
Students' locker fees paid at the laboratory.....	308 90
Examination of specimens other than stated below.....	1,317 50
Examination of surgical specimens for Drs. Albert Vander Veer, W. G. Macdonald, A. W. Elting and J. A. Sampson.	1,000 00
Supplies (culture media, stains, etc.).....	30 25
¹⁶ City Department of Health.....	1,500 00
¹⁶ State Department of Health.....	2,250 00
¹⁶ Students' fees paid to the Registrar of the Albany Medical College	1,990 00
¹⁶ Received from the Albany Medical College as per statement of Registrar	556 37
All other sources	65 59
Total	\$9,042 76

¹⁶ See page 86, footnotes 18 and 20.

¹⁷ *Laboratory Expenses.*

Electricity (light and power)	\$12 50
Instruments and laboratory apparatus (other than paid for by Registrar of the Albany Medical College).....	285 40
Salaries and labor in excess of that paid by Registrar of the Albany Medical College	2,033 63
Office supplies	20 83
Purchase and maintenance of animals.....	43 75
Cleaning supplies	5 25
Telephone	67 42
Books	26 75
Miscellaneous	15 70
¹⁸ Memorandum of payments made by the Registrar of the Albany Medical College, from September 1, 1909, to September 1, 1910, on account of Bender Laboratory (including fixtures, gas, apparatus, chemicals, salaries, labor and coal)	6,296 37
Balance on hand August 31, 1910.....	235 16
Total	<u>\$9,042 76</u>

STATEMENT OF ACCOUNTS (FROM SEPTEMBER 1, 1910, TO SEPTEMBER 1, 1911),
Laboratory Earnings.

Balance on hand September 1, 1910.....	\$235 16
Students' locker fees paid at the laboratory.....	330 00
Examination of specimens other than stated below.....	2,201 00
¹⁹ Examination of surgical specimens for Drs. Albert Vander Veer, W. G. Macdonald, A. W. Elting and J. A. Sampson	800 00
Supplies (culture media, stains, etc.).....	41 77
²⁰ City Department of Health.....	1,500 00
²⁰ State Department of Health.....	2,000 00
^{20 21} Students' fees paid to the Registrar of the Albany Medical College for privilege of instruction at the Bender Hygienic Laboratory	2,130 00
²⁰ Received from Albany Medical College as per statement of Registrar	2,142 50
All other sources	14 15
Total	<u>\$11,394 58</u>

¹⁷ Not including payments made by the trustees, for insurance, repairs, etc.¹⁸ Statement of Registrar received February 10, 1911. See also footnote 20 and footnote 23.¹⁹ This includes amount due (\$100.00) from estate of Dr. W. G. Macdonald.²⁰ Statement of Registrar of Albany Medical College (footnote 23) \$7,772.50 minus cash received by Registrar for work done exclusively at laboratory as follows—City Department of Health \$1,500, State Department of Health \$2,000, students' fees \$2,130, equals \$2,142.50.²¹ See announcement of Albany Medical College, 1911-12, p. 25 and 34.

"Laboratory Expenses."

Electricity (light and power)	\$36 30
Instruments, laboratory apparatus and supplies (other than paid for by the Registrar of the Albany Medical College.)	364 63
Salaries and labor in excess of that paid by the Registrar of the Albany Medical College.....	1,936 06
Petty accounts, including office and cleaning supplies, expressage, laundry, collection of culture tubes, etc.....	279 79
Purchase and maintenance of animals.....	154 57
Telephone	112 84
Books, including subscription to and binding of index medicus, surgical and post-mortem records.....	46 45
Ice	32 50
²² Payments made by Registrar of Albany Medical College.	7,772 50
²⁴ Balance on hand September 1, 1911.....	658 94
Total	<u>\$11,394.58</u>

III. RECOMMENDATIONS AND SUGGESTIONS FOR THE FUTURE.

Although many changes involving routine, records, organization, teaching, equipment, repairs and finances have been made during the past two years, I believe that the efficiency of the laboratory in its varied interests may be still further increased; ideally, perhaps, by securing sufficient endowment and thoroughly reorganizing the work. Practically, however, changes should be made here and there from time to time; these, as a result of past experience should adapt the laboratory to an ever changing environment—by evolution,—with this in mind I offer the following recommendations and suggestions in the different phases of the laboratory work.

Routine.—The routine work has become so great that, although considerable material for teaching is secured and an excellent training is furnished for the laboratory assistants, the

²² Not including payments made by the trustees for insurance, repairs, etc.

²³ Memorandum of payments made by the Registrar of the Albany Medical College between September 1, 1910 and August 31, 1911 on account of Bender Laboratory (including salaries, services, apparatus, chemicals, coal, gas, alcohol and fire extinguishers) is \$0,586.00; of this \$1,814.40 was itemized separately as paid for microscopes solely for use of the medical students and regarded as the exclusive property of the Albany Medical College which pays the insurance upon them. In addition to this there was considerable apparatus not so itemized, (as requested in my letter of October 9, 1911), including

(1) oil immersion lenses,

(2) a dark ground illuminating apparatus,

(3) considerable blood apparatus for use of third year students.

This sum should also be subtracted from the memorandum

\$0,586.00

1,814.40

\$7,772.50

²⁴ See footnote 10.

amount should either be reduced (at least limited) or extra assistants appointed to handle it.²⁵ Unless some such change is made the quality of the teaching or of the routine must suffer. The increasing pressure of this commercial routine now allows little time or energy for developing the teaching or keeping alive the scientific spirit by the investigation of problems. For the best interest of the laboratory an earnest effort should be made to secure a proper balance of routine, teaching and research.

Records.—The great value of the laboratory records of the past fifteen years has already been referred to²⁶ They should furnish not only important information in individual cases but offer abundant material for problems in practical medical research and so help to advance the general welfare. This data with comparatively little effort could be made of very great value, as above indicated, if the small slips sent with the specimens were, in every case, accurately, completely, and legibly filled out; this, however, is rarely done. Therefore, of necessity, not only mistakes in the current reports are made, but such records are rendered of little or no value for future reference. I should suggest that to every report blank on which the slip accompanying the specimen had been incompletely filled out, a small note such as the following be affixed:

Note.—For intelligent laboratory co-operation, in the interest of your patient and as a matter of accurate and valuable record, this data is necessary and is therefore respectfully and earnestly requested,—for the blank received with this specimen was incompetently filled out—that is—no indication was given regarding:²⁷

1. Where the laboratory report is to be sent.
2. Name of the physician in charge of the case.
3. Cross reference to the clinical record (hospital or private).
4. Name, age and sex of the patient.
5. Clinical diagnosis, or probabilities.
6. Duration of the disease.
7. Nature and source (anatomical) of the specimen.
8. Date the specimen was secured.
9. Remarks—indicating
 - (a) Nature of the examination desired.
 - (b) Special points of interest in the case.

²⁵ Since this report was written two additional assistants have been secured, one to give his full time and one to devote four hours each morning to the routine laboratory work.

²⁶ See pages 73 and 74.

²⁷ Line to be drawn through statements correctly and legibly recorded.

Will you please give this your attention. Duplicate reports of examinations in the case of hospital patients will be sent to the physician in charge for his private records if he will notify the director of the laboratory in writing and pay the actual cost (a few dollars a year) of such duplicates.

Signed,

Director.

If this matter is thus forcibly drawn to the attention of the physicians, ready co-operation should be secured in this very important (though seemingly trivial) matter. If response is not thus secured, no reports should be sent out to such men until this minimal data is given for the purpose of permanent laboratory record.

Organization.—For the best interest of the laboratory it would seem well to make every effort to continue the system of organization of the staff and other laboratory workers above described.²⁸ If this is done the employees by natural increase of recompense for and interest in their work may have inducement to remain for a longer time, avoiding too frequent and at times complete change in the staff,²⁹ (so harmful in carrying on uninterruptedly the work), thus increasing the worth of the laboratory.

It is very doubtful if this can be permanently accomplished, however, unless certain changes are made in the financial arrangements by which more business like methods shall be adopted, the director relieved of the details of financial management, or be responsible only to the Board of Trustees of this laboratory and not to the registrar of the Albany Medical College for practically all the financial matters of the Bender Hygienic Laboratory.³⁰

Teaching and Equipment.—There should be an excellent opportunity to develop the teaching further, provided that each year a definite and somewhat increasing appropriation is allowed by the Albany Medical College for this purpose. If this were done the students could have more individual instruction, the equipment might be kept in excellent working condition and newer apparatus more frequently provided.

As the clinical help derived from an accurate working knowl-

²⁸ See page 77 and 78.

²⁹ See pages 77 and 78.

³⁰ See page 98.

edge of the so-called clinico-pathological laboratory procedures is well recognized, it is particularly desirable that our recent graduates should be enabled to start in on their practice with the necessary laboratory as well as clinical apparatus. Such work is not only a source of income to young practitioners, but is an incentive to the older physicians as well in the accurate scientific study of their cases. A suitable microscope is probably the most important and expensive single piece of such laboratory apparatus but as the physician on starting practice can usually ill-afford this, he is apt to put off buying it and too often never secures any suitable microscope. It is particularly important that he should have its aid while the value of and familiarity with laboratory procedures are still fresh in his mind. Because of this, it is suggested that an arrangement be made by which most of the money paid by the students for rental of a microscope during the first three years at medical school be applied to its purchase; in order that on graduation, by payment of a small sum in addition to the graduation fee, they may be enabled to secure a good microscope for their personal property.³¹ This is not, however, altogether altruistic for the rental charged and money paid ought to afford the school about 10%; this should cover all repairs, and allow a fair return (about 5% interest) on the money invested. Also, knowing that they may own the microscopes, better care would be taken of them and the school would have an opportunity to replace those taken by other instruments and thus constantly possess new equipment. The medical schools adopting this method do so, not to make money, but to encourage the development of modern scientific medicine.

TABLE V.

Albany Medical College Announcement for	Number of Students				School year of
	1st yr.	2nd yr.	3rd yr.	4th yr.	
1908-09	50	49	30	42	1907-08
1909-10	49	48	43	40	1908-09
1910-11	64	47	43	42	1909-10
1911-12	69	53	43	43	1910-11
	*82	50	47	42	1911-12

* Of these 78 are in actual attendance.

³¹ Such a plan is now used at McGill University and the University of Pennsylvania

In course 1, *normal histology*, given in the first year of the medical course, the number of students has so increased (64% in the past four years—see table V), that in spite of the effort made to increase the number of assistants, and, hence, provide more personal or individual instruction, and the attempts to secure better ventilation—neither object has been entirely successful. The crowding is so great that it is necessary to call a “recess” frequently and throw the windows wide open to rid the classroom of foul air. The students have so little room at the tables that they actually touch elbows when working. Because of this, during the weekly and final examinations, it is necessary to assign many of the students to desk space in the routine laboratory down stairs. This is a poor makeshift for it deprives the students of much valuable instruction, if done regularly, and it interferes greatly with the important routine work of the laboratory. In justice to each student and in fairness to individuals and institutions depending on the laboratory for their routine work, some change should be made by which the number of students should be limited or more ample space and better facilities provided for them.

It is interesting to note that although during the past four years there has been an increase of 64% in the number of first-year students, the number in the succeeding years has remained practically constant.³² This would seem to indicate that high standards have been maintained in the first year and should be particularly encouraging to those who have at heart the welfare of the Albany Medical College and its development into a stronger school.

Courses 2 and 3. Experimental Physiology.—The importance of individual laboratory work in this subject is too well recognized to need more than mention. The Bender Laboratory should be in no way responsible for the conduct of experimental physiology as a purely demonstration course without any individual work, because for the latter it has no adequate facilities. A physiological laboratory is greatly needed by the Albany Medical College in order that the students may have practical individual work, for it is obvious that many physiological demonstrations are of very little value when seen, or rather not seen, at long range.

³² See table V.

Course 4. Bacteriology and Pathology.—We are seriously hampered in the practical instruction by the small number of post-mortem examinations available for the students and the lack of proper facilities for performing them.³³ The laboratory possesses a well arranged light room, an excellent table and all requisites necessary for making careful post-mortem examinations. It is possible that the co-operation of the coroner's physicians may be obtained in this matter if they are given an official position in the school, such as demonstrator of gross pathology. For years the Bender Laboratory has made, at various undertaking rooms, often in very unsuitable quarters, many post-mortem examinations, without charge, for the coroner's physicians who received twenty dollars for each examination, even if made by this laboratory. If a definite time were agreed upon such examinations could readily be made at the laboratory. Such a plan has been successfully tried, in a few instances, during the past year. Thus, not only would this material be available for teaching and other scientific work, but facilities provided for the coroners' physicians to check up gross diagnoses by microscopic examination and an opportunity afforded for efficient modern medico-legal work.

A wealth of pathological material from animals might also be secured through Drs. Kelly and Wills, who are associated with the State Department of Agriculture. Dr. Kelly has shown the most friendly interest and co-operation in the laboratory and during the past year we have studied together in animals numerous interesting and important pathological conditions analogous to disease in human beings. I should suggest that these men be appointed instructors in comparative pathology and work in conjunction with the other instructors in making this large amount of fresh material directly available for the students and indirectly to the medical and veterinary professions by applying the routine and special methods of human pathology to the study of animal diseases.

Course 5. Anatomy and Pathology of the Nervous System.—The cabinet provided two years ago is now entirely filled, for Dr. Archambault has devoted much time to the preparation and

³³ At this time, owing to the inadequate and even indecent, conditions under which many of the coroners' post-mortem examinations are performed, there is a movement on foot to establish a suitable morgue. This should receive the support not only of the legal and medical professions, but of all who are interested in modern efficient legal medicine or take pride in general civic development.

study of large serial sections of the brain, and more cabinet space is needed to house these valuable specimens.

Course 6. Surgical Pathology.—Although by transferring this course into the second year the attendance has become entirely satisfactory, it is practically impossible to teach surgical pathology *as such* to students who have had neither pathology nor surgery. It was hoped that the first half year might be devoted to "applied bacteriology," with special emphasis on the practical limitations and advantages of such laboratory work. As the class meets but once a week, such practical work seems to be unsatisfactory. Therefore, if this course is to be continued in the second year, it would seem well to give it during the second-half year, after some progress has been made in the subject of pathology.

Course 7. Clinical Microscopy.—On winter afternoons it is almost impossible to use the microscope without appropriate artificial lights which are therefore urgently needed. Temporary Welsbach lamps have not proved satisfactory because they are so easily broken. Good ground glass electric bulbs should prove satisfactory if the large class-rooms, indeed the entire building, should be systematically wired for electricity and certain fixtures provided.

There is greater need, I believe, of strengthening the present courses, by uniting them in some cases, than by the formation of subsidiary courses, which tends to weaken all. To accomplish this, however, it is necessary to have definite and increasing appropriations, as well as more full time and better paid men to elaborate the courses and give instruction.

Repairs and General Equipment.—Numerous alterations and necessary repairs have been made during the past two years; the laboratory, however, shows the wear and tear of fifteen years. The interior of the building looks shabby and needs repainting and varnishing. This is particularly true of the room used for a chemical laboratory, which is badly blackened owing to the lack of any efficient hood to collect and carry off the gases. The plaster has fallen, in numerous places, from the walls and ceiling; this is especially noticeable in the basement and in the back room on the first floor. The metal ceiling also, in the amphitheatre, near the door on the mezzanine landing, is badly corroded, for it is directly beneath a sink which is almost constantly

in use and is so poorly protected by washboards that in spite of care water seeps in behind and drips to the ceiling below. The same is true of the sink in the room used in the routine examination of the surgical specimens. Indeed, the plumbing of the entire building is old-fashioned—there are no traps which can be readily cleaned and as a result, the various sinks are very frequently stopped up, even with the utmost care and use of special strainers. This is due, in part, to the character of the original plumbing, and in part to makeshift additions for special purposes.

As above mentioned, the building has never been systematically wired for electricity. A few years ago wires with *one* socket in each room were placed in the media, bacteriological, chemical and surgical specimen rooms. Since that time, another socket has been placed in the media room, one at the outside door, one in the lower and one in the upper hall, and the lecture room wired for the projection lantern. Otherwise, there is no electricity in the amphitheatre available for light, heat or power, none at all on the entire upper floor, in the director's room, first floor or basement. The building should be systematically wired not only for light and power but also as a matter of safety in the bacteriological and technical room, where electricity instead of the small pilot gas flames in use at present, should be available for heating the thermostats which are used night and day.

Three years ago, the tubes were replaced in the boiler of the heating apparatus and two years ago a new smoke pipe was installed. In spite of these repairs, it has been impossible to heat the building properly not only in the coldest weather, but also during the greater part of the winter. The office, director's and classroom are too cold for anyone to work in and small gas stoves and bunsen burners, used as a makeshift, very soon vitiate the air and render good work impossible. Whether this is due to lack of radiating surface or to inefficient heating apparatus, I am unable to say.

For years, there was no running hot water in the building. All such water was heated in small quantities on gas stoves. A vulcan heater has been installed and when run for two hours a day furnishes an adequate supply of hot water. When the steam heat is on it would seem preferable and less expensive to obtain a constant supply of hot water from this source.

Owing to the strong west wind, at times amounting to a gale, it is impossible to ventilate the rooms on the front of the building (particularly the Director's room) without making them unfit for use. Papers and even reagent bottles and other apparatus are continually blown from the desks, even in the hot summer weather. It is difficult to appreciate the annoyance and inconvenience caused. I should suggest that suitable "non-draft" ventilators be installed at least in the rooms facing the west.

Many of the gas cocks, particularly in the class-room, are now too large and vertically placed. They should be horizontal and smaller, for it is difficult to make the rubber tubing stay attached and impossible to prevent its kinking and breaking at the base.

Considerable special and general equipment has been secured during the past two years,³⁴ so that there are few urgent needs. A small centrifuge for use in the bacteriological room, however, is advisable, not only for convenience, but to save unnecessary wear of the large instrument in the media room. The laboratory is at present well equipped, although to keep it so, a certain amount of money should be allowed each year for maintenance and additions to the equipment.

Regarding repairs to the building, it is suggested that there be systematic inspections at frequent intervals and that more attention be given to the care and the up-keep to counteract the unusual wear and tear to which the laboratory is subjected. The building is no longer new and such care is particularly important from now on not only for its general appearance, but for its continued usefulness. This would be greatly aided by efficient janitor service such as might be obtained if facilities could be provided for a suitable man and his wife to live in and take care of the building.

Financial Status.—The finances of the laboratory, as noted on page 84, seem to have been unnecessarily complex—for example, the stenographer was paid, before September, 1909, by the Albany Hospital, St. Peter's Hospital, the Albany Medical College and the Bender Laboratory—a small sum by each. Also various assistants received their pay from individuals for special work so that their "allegiance" was necessarily to particular

³⁴ See pages 79 and 80.

men rather than to the laboratory. These examples may serve to show how necessary a change in such conditions was for an harmonious staff and to secure the "team work" necessary for efficient service. This condition, however, has been somewhat bettered, for arrangements have been made by which such money is paid to the laboratory and deposited by the director in a separate laboratory account. Therefore, the director now pays all the salaries except those of two men who are paid by the Albany Medical College directly and they give practically their entire time to the laboratory routine rather than to teaching. As the financial affairs of the laboratory have now attained considerable size, it would seem well to have them put on a sound business basis.

A day-book has been kept as in past years; in addition, all money received is shown by the bank deposit book and all money expended, by the stubs and returned checks; although this is undoubtedly an improvement, it is suggested that the services of an expert be secured to establish, and temporarily supervise, a satisfactory business-like method of keeping the books.

The amount paid for laboratory services for the clinico-pathological, general bacteriological, surgical specimens and post-mortem examinations, and for teaching, is, with certain exceptions, much too small; it is far less than in most places where a similar standard of work is maintained. Although there has been some improvement in this respect, it is recommended that this matter be given your serious consideration. Among the most striking examples are the City Department of Health and the Albany Medical College; the former paid the laboratory in 1908-09 \$1,500 for the examination of 1,369 specimens and the preparation, distribution and collection of cultures. In the year 1909-10, 2,558 such examinations were made—an increase of 1,189 specimens, or 86%, and yet there has been no increase in the recompense given to the laboratory. In addition to this the laboratory makes numerous tests of blood for typhoid, which is considered a public health matter in other cities, and as this is not in the contract, no pay is received from the city of Albany for such examinations and yet these cannot be refused without detriment to the health of the city.

Albany Medical College.—For some years the Albany Medical College has apparently paid annually approximately \$7,000 on

account of the Bender Laboratory as seen by memorandum of the registrar, but from this should be deducted certain cash payments for work done exclusively at the Bender Laboratory but paid to the registrar of the Albany Medical College and not to the laboratory. Among these payments are the money received from the city, \$1,500, and State, \$2,000, contracts and the fees of the first, second and third-year medical students for laboratory work, averaging \$2,000, done exclusively at the Bender Laboratory. I can see no reason why these payments should not be made to the laboratory trustees, and in addition, a certain proportion of the general tuition fee, for the numerous didactic lectures given by the laboratory staff. Special equipment purchased by the school solely for the use of the students and regarded as its exclusive property, is of little value to the general work of the laboratory and should not be regarded as payment to the laboratory for teaching service. Indeed, for miscellaneous clinico-pathological, bacteriological, surgical and post-mortem examinations made for numerous individuals and institutions, other than the city and State (just referred to) the laboratory receives about \$3,000 a year. This is also used for the most part to pay salaries and labor, in excess of that paid by the Registrar of the Albany Medical College, of persons who devote a large part of their time to teaching the medical students.

From this it appears that the faculty of the Albany Medical College has assumed many of the duties and responsibilities of your board. This assumption has been natural perhaps, as three, that is, one-half, of the board are members of the faculty of the Albany Medical College, and because in the past, when it was sorely needed, the college always stood behind the laboratory financially. However, these two boards are legally separate and as the affairs of the laboratory have now attained considerable size, it would seem well to put them on a business basis. The Albany Medical College should pay the trustees of the laboratory (by contract if possible) a definite yearly sum to be increased, depending on the number of students and the character of the teaching required. If this is done there should be an increasing yearly surplus for permanent endowment.

It is doubtful if this laboratory would have been started or could have been run in the past without the "backing" of the Albany Medical College. It could now, perhaps, exist indepen-

dently, for the commercial side might be greatly increased if the time spent in school work should be directed to that end. The work of this laboratory, however, has been in the past and should be in the future in the interest of medical education, for teaching, research, and routine diagnosis. Both school and laboratory would be much weaker if separated; for a short time both might gain in money, but would surely lose in much that is worth while.

In spite of the present makeshift arrangement, the balance in the hands of the director has increased from \$24.15 on September 9, 1909 (and at this time there were several hundred dollars of back bills later paid by the director) to \$235.16 on September 1, 1910, and to \$658.94 on September 1, 1911 (all bills even for the previous month, having been paid). Although this is surely encouraging it is difficult, indeed practically impossible to conduct the finances of the Bender Hygienic Laboratory on a business basis when two boards of trustees manage the affairs of the laboratory without any definite agreement for what proportional share of the expenses each is to be responsible.

Indeed, until September, 1909, I do not know that a financial report had been included in the report of the director to the trustees of the laboratory, but a memorandum of accounts was sent to the Registrar of the Albany Medical College to be included in his financial report, never to my knowledge actually seen by the entire Board of Trustees of this laboratory. I respectfully suggest to your serious consideration the study of the finances of the laboratory.

Dr. A. B. Van Loon has expressed a desire to make a financial arrangement with the laboratory similar to that now in force with other physicians for laboratory service in connection with his private patients, and I believe such an arrangement should be made.

Although the laboratory is not a money-making institution, it should receive a reasonable and fair recompense for work done in order that it may develop the teaching and routine and have opportunity for research.

IV. THE WORTH OF THE LABORATORY.

The laboratory service includes the examination of specimens for the diagnosis of infectious diseases which are a menace to

the public health; it is of direct benefit to the individual also, in the more accurate diagnosis of many diseases and hence is often the only means of making intelligent treatment and prognosis possible.

The Bender Laboratory teaches not only undergraduate medical students many fundamental principles of modern medicine which should later redound to the welfare of the community, but sets a standard of scientific accuracy and invites the helpful co-operation of practitioners. Teachers and citizens interested in public and private health methods are welcome to visit the laboratory and see something of the modern methods of diagnosis.

The value of the work formerly done for the coroners' physicians is, perhaps less obvious. The application of accurate, thorough and more modern scientific methods, as an aid to finding out the truth should, however, be apparent to all. The recognition of this by the legal profession has led to the excellent Medical Examiner System of Massachusetts.

Some endowment is urgently needed by the laboratory, for at present it has barely enough to pay the insurance and necessary repairs. It is hoped that the character of the work done will so meet the approval of the citizens of Albany that they will respond and co-operate by contributing towards a sufficient endowment. In considering the financial status, it should be understood that the Bender Hygienic Laboratory exists solely for the good that it may do in public and private health work in the routine examination of specimens, in teaching, and in research, considering these in their broadest meaning. It is not a money making institution, but should have a reasonable remuneration for work done in order that it may continue and extend its public service.

In conclusion, I would express my appreciation to the trustees for their friendly interest and co-operation in the work of the laboratory.

Respectfully submitted,
THOMAS ORDWAY,
Director.

V. ILLUSTRATIONS.

- Fig. I. Bender Hygienic Laboratory, Albany, N. Y. (Front and south side).
- Fig. II. Lecture room—first floor (Toward west).
- Fig. III. Culture media and sterilizing room—second floor (Toward south and east).
- Fig. IV. Room for surgical pathology—second floor—in the background are the doors to the culture media and sterilizing room (at the left) and the technical room (in the centre) (Toward west).
- Fig. V. Class room, laboratory for students—third floor (Toward south and east). Through the end windows the proximity to the hospitals is shown; the Albany County Hospital (at the left); one of the ward buildings of the Albany Hospital (at the right).
- Fig. VI. Class room—laboratory for students—third floor (Toward west and north). At the left may be seen two of the small rooms used for the class microscopes and supplies.
- Fig. VII. 1. Director's room—second floor (Southeast corner).
2. Director's room—second floor (Wall toward south).
3. Technical room—second floor (Toward east).
4. Technical room—second floor (Toward west).
- Fig. VIII. 1. General class room—third floor—detail toward south, showing small rooms for special workers and class supplies.
2. General class room—third floor—detail toward south, showing corner used in practical "case teaching" to small sections.
3. Lecture room—first floor—detail toward west.
4. Room for surgical pathology—second floor—detail southeast corner.

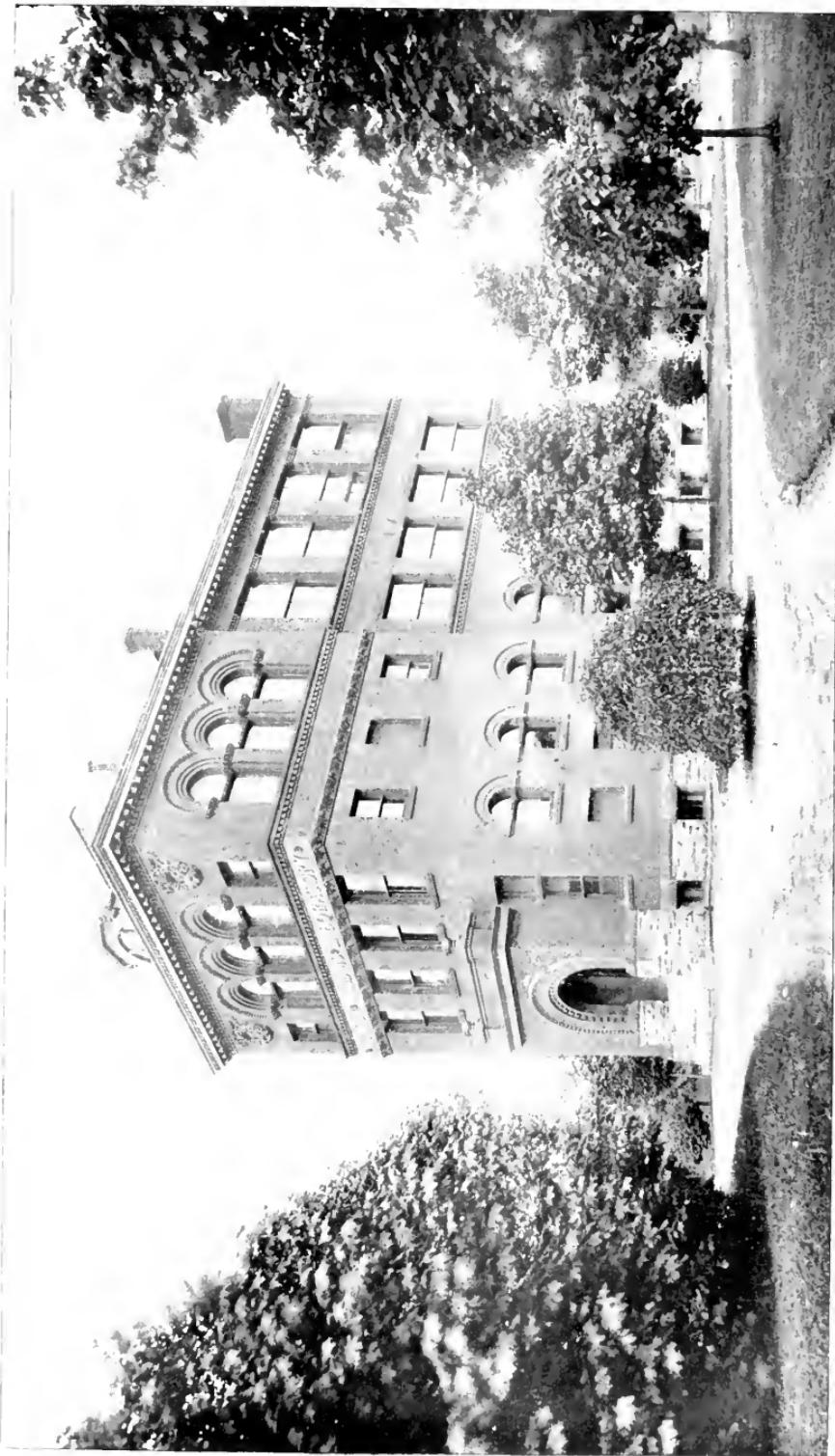


Fig. 1

Fig. II



FIG. III



Fig. IV

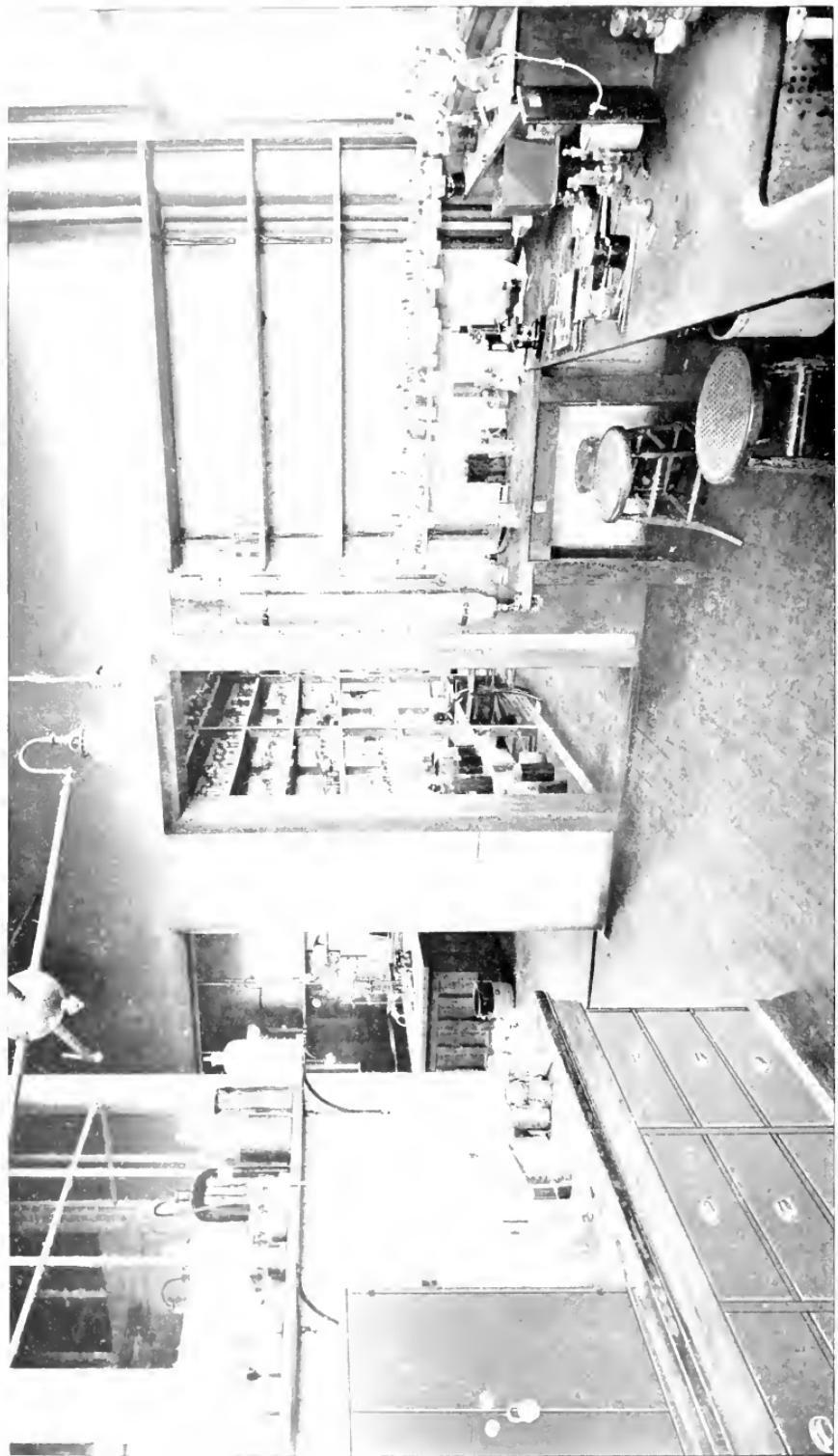




Fig. V



FIG. VI



1



2



3



4

FIG. VII



Fig. VIII

Correspondence

TOILET VERSUS WATER CLOSET.

To the Editor:

Is it too late to nail to the counter a spurious neologism that has been insidiously working its way for some time into the currency of the King's English? In a word, shall *water closet*, a term so acceptable to civilized man that it has been welcomed to the vocabularies of almost all modern languages, give way to *toilet* as implying the like concept? Surely physicians who carry the principles of asepticism into the practice of speech and abhor impurities in their mother tongue may still accomplish something by making a stand against the squeamishness of female patients and nurses upon whose lips the offender is oftenest heard. The last straw in my own tolerance came the other day in the shape of a circular issued by a State Board of Health over the signature of its secretary, a physician, in whose virile mind a spade is usually that and nothing else. This was the shocking clause: "plenty of running water, soap, convenient *toilets* to receive the dejecta from the patients."

"O, what a fall was there, my countrymen!"

A water closet, night stool, bed-pan, urinal, privy, dejection—for the new word seems to connote all these things—are not and never can be a *toilet* by any stretch of metonymy. Time was, and not so long ago, when one might speak of a lady as being at her toilet without risk of ambiguity. Now the word is apparently taboo except when used in a mealy-mouthed attempt to aestheticise an uncompromising act of nature.

"Immodest words admit of no defence
For want of decency is want of sense."

But there is nothing more immodest than false modesty and the offence against decency is aggravated a hundredfold when in addition violence is done to the genius of our English tongue.

When Pope wrote,

"The merchant from the exchange returns in peace
And the long labours of the toilet cease,"

there was no thought in the poet's mind of protracted travail at stool, which interpretation, if we are not careful, may one day be read into the couplet.

Help the profession, Mr. Editor, to hold fast to honest words and teach it to look askance at such as plead for acceptance, or thrust themselves upon us, under the guise of a specious refinement; and let those of us who still pretend to chivalry make a supreme effort to prevent the dressing-table of a lady, her costume, or her act of dressing, from acquiring irrevocably the perverted significance as to which I have ventured to put the brethren on their guard.

B. C. A.

Providence, R. I., December 11, 1911.

Editorial

"Yes. Mr. Brooke says he is one of the Lydgates of Northumberland, really well connected. One does not expect it in a practitioner of that kind. For my own part I like a medical man more on a footing with the servants; they are often all the cleverer. I assure you I found poor Hicks's judgment unfailing; I never knew him wrong. He was coarse and butcher-like, but he knew my constitution. It was a loss to me, his going off so suddenly."

Middlemarch.

GEORGE ELIOT.



Doses and Method of Administration of Diphtheria and Tetanus Antitoxin. Dr. GEORGE W. GOLER, Health Officer of the City of Rochester has issued the following card of instructions to the physicians of that city. As a crystallized statement of the dosage and method of administration of antitoxin, the very practical instructions are worthy of wide distribution.

Dr. Wm. H. Park of the Research Laboratory of the New York City Health Department, has proven by animal and human inoculation that it takes some time for the antitoxin to be absorbed from the subcutaneous tissue. Specimens of blood withdrawn

from treated cases show maximum amount is not absorbed until twenty-four to forty-eight hours. That, when one administers diphtheria antitoxin in repeated doses, say 5,000 units repeated every twelve hours for three doses, the maximum antitoxin content of the blood is never so high, nor is this maximum content reached anywhere near so quickly as it would be if, say 15,000 units had been given as an initial dose. Further, the antitoxin is absorbed more rapidly when it is injected intramuscularly than subcutaneously, and of course, it is all immediately absorbed if injected intravenously. In view of these facts we recommend that the initial dose should be large. In fact, if one sees a case in which one is more or less decided that one will give, say 15,000 units in three or four doses, that one should give this all in one dose. Approximately, these would be the doses recommended for cases seen early:

One tonsil involved, constitutional symptoms not marked, not less than 3,000.

Both tonsils involved, constitutional symptoms fairly severe, not less than 6,000.

One or both tonsils involved, constitutional symptoms severe, not less than 9,000.

Nasal or laryngeal diphtheria and all in which constitutional symptoms are severe, not less than 12,000.

When the cases are seen late in the disease, and are not already improving it is recommended that these doses should be doubled or given intravenously, or both.

For very severe cases with extensive membrane and marked constitutional symptoms, 20,000 units given intravenously.

Dr. Park reported that in their cases the advantage of giving antitoxin intravenously in laryngeal cases has not been so marked as in the cases with pronounced toxæmia. (However, it might be that in a more extensive series of cases this method would show better results.)

For immunizing use a 1,000 unit for all ages.

TETANUS. In cases of developed tetanus, a large dose (20,000 units) should be given intravenously at the earliest possible moment and in about twelve hours a second dose should be given subcutaneously.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, DECEMBER, 1911.

Deaths.

Consumption	25
Typhoid fever	1
Scarlet fever	0
Measles.	0
Whooping-cough.	0
Diphtheria and croup.	4
Grippe.	2
Diarrheal diseases	2
Pneumonia.	12
Broncho-pneumonia.	4
Bright's disease	17
Apcplexy.	5
Cancer.	12
Accidents and violence.	17
Deaths over 70 years.	38
Deaths under 1 year.	20
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Total deaths	174
Death rate	20.47
Death rate less non-residents.	17.06

Deaths in Institutions.

	Resident.	Non-Resident.
Allany Hospital	8	12
Allany Orphan Asylum.	0	0
Child's Hospital	1	0
Allany County Jail.	0	0
County House	7	2
Homeopathic Hospital	3	3
Hospital for Incurables.	0	0
Little Sisters of the Poor.	1	0
Public places	0	1
Penitentiary.	0	0
St. Frances De Sales Orphan Asylum.	1	0
St. Margaret's House.	3	0
St. Peter's Hospital.	4	5
Austin Maternity Hospital.	1	0
Allany Hospital, Tuberculosis Pavilion.	2	0
Confederation of Labor.	0	0
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Births.	31	23
Still Births		3

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

In the Bureau of Plumbing, Drainage and Ventilation there were one hundred ninety-two inspections made of which fifty-eight were of old houses and one hundred thirty-four of new houses. There were forty-eight iron drains laid, thirty-nine connections to street sewers, thirty-nine tile drains, forty-four cesspools, sixty-five wash basins, eighty-one sinks, sixty bath tubs, sixty-six washtrays, one butler's sink and one hundred four tank closets. There were ninety-eight permits issued of which eighty-eight were for plumbing and ten for building purposes. Fifty-three plans were submitted, of which two were for old buildings and fifty-one for new buildings. Thirty-eight houses were tested, six with blue or red and there were thirty-two water tests. Twenty-seven houses were examined on complaint and forty-eight were re-examined. Sixteen complaints were found to be valid and eleven without cause.

BUREAU OF CONTAGIOUS DISEASE
Cases Reported.

Typhoid fever				14
Scarlet fever				8
Diphtheria and croup.....				32
Chickenpox.				26
Measles.				12
Whooping-cough.				2
Consumption.				23
Total.				117

Contagious Disease in Relation to Public Schools

	Reported.		Deaths.	
	D.	S.F.	D.	S.F.
Public School No. 2.....	..	I	..	..
Public School No. 7.....	I	..	..	..
Public School No. 9.....	I	..	I	..
Public School No. 16.....	I	..	..	..
Public School No. 20.....	3	..	..	..
Public School No. 21.....	4	..	2	..
St. Patrick's School.....	I	..	..	..
Cathedral School	I	..	I	..
Polish School	I	..	..	..
Number of days quarantine for diphtheria:				

Longest..... 41 Shortest..... 5 Average..... 16 15/16

Number of days quarantine for scarlet fever:

Longest..... 21 Shortest..... 17 Average..... 19

Fumigations:

Houses.....	50	Rooms.....	206
Cases of diphtheria reported			32
Cases of diphtheria in which antitoxin was used.....			30
Cases in which antitoxin was not used.....			2
Deaths after use of antitoxin.....			3

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	8
Negative	11
Failed	0
	19

TUBERCULOSIS.

Living cases on record December 1, 1911. 360
 Cases reported during December:

By card	15
Dead cases by certificate	8
	23

Dead cases previously reported	17
Dead cases not previously reported.	8
Duplicates	6
Recovered	0
Removed	4
Unaccounted for	3
	38

Living cases on record January 1, 1912. 345
 Total tuberculosis death certificates filed during December. 25
 Out of town cases dying, Albany:

City at large	1
County hospital	1
	2

Net city tuberculosis deaths. 23

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	18
Initial negative	58
Release positive	15
Release negative	41
Failed	11
Total	143
Test of sputum for tuberculosis:	
Initial positive	20
Initial negative	15

BUREAU OF MARKETS.

Market reinspections	109
Public market inspections	22
Fish market inspections	5
Pork packing house inspections	1
Rendering establishment inspections	2
Slaughter house inspections	4
Hide house inspections	3
Fish peddlers inspected	1

MISCELLANEOUS.

Mercantile certificates issued to children	19
Factory certificates issued to children	9
Children's birth records on file	28
Number of written complaints of nuisances	21
Privy vaults	2
Closets	1
Drains	1
Plumbing	6
Other miscellaneous complaints	11
Cases assigned to health physicians	91
Calls made	214

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING—STATISTICS FOR DECEMBER, 1911.—Number of new cases, 146; classified as follows: Dispensary patients receiving home care, 12; district cases reported by health physicians, 6; charity cases reported by other physicians, 36; moderate income patients, 69; metropolitan patients, 23; old cases still under treatment, 103; total number of cases under nursing care during month, 249. Classification of diseases for the new cases: Medical, 50; surgical, 2; gynecological, 3; obstetrical under professional care, mothers 37, infants 36; infectious diseases in the medical list, 18; removed to hospitals, 12; deaths, 15; discharged cured, 103; improved, 10; unimproved, 9; number of patients still remaining under care, 100.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; number of students in attendance, 2; number of nurses in attendance, 4; number of patients carried over from last month, 0; number of new patients during month, 2; number of patients discharged, 1; number of visits by head obstetrician, 0; number of visits by the attending obstetrician, 6; number of visits by students, 26; number of visits by nurses, 31; total number of visits for this department, 63.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,175; for professional supervision of convalescents, 689; total number of visits, 1,864; cases reported to the Guild by 4

health physicians, and 42 other physicians; graduate nurses 8, and pupil nurses 9 on duty.

Dispensary Report.—Number of clinics held, 87; number of new patients, 125; number of old patients, 304; total number of patients treated during month, 429. Classification of clinics held: Surgical, 11; nose and throat, 7; eye and ear, 15; skin and genito-urinary, 9; medical, 12; lung, 10; dental, 1; nervous, 1; stomach, 3; children 12; gynecological, 6.

MEDICAL DEPARTMENT, STATE LIBRARY.—The current medical journals received by the State Library are opened to the public Monday, Wednesday and Friday afternoon, from three to five. The reading room is on the third floor of the Public Charities building, southwest corner of Washington avenue and Swan street. The journals may be borrowed.

Miss Bunnell will be glad to assist anyone in getting references.

OHIO STATE MEDICAL TEACHER'S ASSOCIATION MEETING.—The meeting of the Ohio State Medical Teacher's Association was held in the Chittendon Hotel, Columbus, Ohio, December 26, 1911. The president, Dr. H. Kennon Dunham, professor of Electro-Therapeutics and Radiology, Medical Department, University of Cincinnati, read his address. The following subjects were presented:

"Autopsies as an Aid in Teaching Special Pathology," by Dr. W. E. Moseley, professor of bacteriology and pathology, Toledo Medical College; "The Value of Didactic Teaching," by Dr. Lyman Watkins, professor of internal medicine, Eclectic Medical College, Cincinnati; "The Relation of Physiology to Clinical Medicine," by Dr. R. J. Hoskins, professor of physiology, Starling Ohio Medical College, Columbus; "Some Principles of Organization to Secure Practical Results in Anatomical Teaching," by Dr. Henry McE. Knower, professor of anatomy, Medical Department, University of Cincinnati "Sectarians in Public Hospitals," by Dr. J. K. Scudder, secretary of the Eclectic Medical College, Cincinnati; "The Relation of Medical Colleges Toward Each Other and Medical Education in General," by W. J. Means, Dean, Starling Ohio Medical College, Columbus.

MEDICAL SOCIETY OF THE COUNTY OF RENSSELAER.—The regular monthly meeting of the Rensselaer County Medical Society was held Tuesday, January 9, 1912, at 8.30 p. m., at the County Court House. Dr. L. B. Mount, of Albany, N. Y., read a paper on "The Uses of Carbon Dioxide in Diseases of the Skin." A case of "Multiple Epindymomata of the Spinal Cord and Brain, Producing a Symptom Complex Clinically Identical with Tabes Dorsalis" was presented by Drs. H. C. Gordinier and H. P. Sawyer, Troy, N. Y. Dr. E. MacD. Stanton discussed "A Study of the Frequency of Surgical Lesions of the Kidneys and Ureter, as Found Clinically and at Autopsy, and the use of the Cystoscope and X-Ray in the Diagnosis of these Conditions."

LARGE CONTRIBUTIONS TO ANTI-TUBERCULOSIS CRUSADE.—The National Association for the Study and Prevention of Tuberculosis and the State Charities Aid Association which in connection with the State

Department of Health is conducting the campaign against tuberculosis in this State has issued a statement that during the past year \$3,550,000 has been appropriated from public funds and donated by private charities to the various anti-tuberculosis activities in the State.

AMERICAN RED CROSS EXHIBITION.—The American Red Cross Exhibition, in connection with the Ninth International Red Cross Conference, announce an exhibition to be held at Washington, D. C., from May 7 to 17, 1912.

The exhibition will be divided into two sections namely Marie Feodorovna and General. The former is a prize competition amounting to \$9,000, which will be divided into nine prizes.

The following are the subjects of the Marie Feodorovna competition:

1. A Scheme for the Removal of Wounded from the Battlefield with the Minimum Number of Stretcher Bearers.
2. Portable Surgeons' Washstands for Use in the Field.
3. The Best Method of Packing Dressings for Use at First Aid and Dressing Stations.
4. Wheeled Stretchers.
5. Transport of Stretchers on Mule Back.
6. Easily Folding Portable Stretchers.
7. Transport of the Wounded between Warships and Hospital, Ships and the Coast.
8. The Best Method of Heating Railway Cars by a System Independent of Steam from the Locomotives.
9. The Best Model of Portable Eoentygen Apparatus, permitting Utilization of X-rays on the Battlefield and at First Aid Stations.

The maximum prize will be awarded to the best exhibit, irrespective of the subject and so on.

The General Exhibit is divided into two parts. The first will be an exhibit by the various Red Cross Associations of the world. The second will be devoted by individuals or business houses of any articles having to do with the amelioration of the sufferings of sick and wounded in war, which are not covered by the Marie Feodorovna prize competition for the year. While the American Red Cross will be glad to have any articles pertaining to medical and surgical practice in the field, it is especially anxious to secure a full exhibit relating to preventive measures in campaign. Such articles will be classified as follows:

1. Apparatus for Furnishing Good Water in the Field.
2. Field Apparatus for the Disposal of Waste.
3. Such Shelter as Portable Huts, Tents and the Like, for Hospital Purposes.
4. Transport Apparatus (to prevent the suffering of sick and wounded), exclusive of such Apparatus as Specified for the Marie Feodorovna Competition.

Only articles having the approval of the Central Committee of the American Red Cross will be accepted.

Further information may be obtained from the Chairman Exhibition Committee, Washington, D. C.

ELLIS HOSPITAL, SCHENECTADY.—By Mrs. Joseph Smitley's will, \$25,000 is left the Hospital Association of Schenectady.

BEQUEST TO ALBANY HOSPITAL.—According to the will of Anderson D. Lawrence, who died November 20, the Albany Hospital is to receive a gift of \$10,000. This will has just been filed in the surrogate's office in Brooklyn and directs that \$10,000 be turned over to Dr. Albert Vander Veer, for the benefit of the hospital.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held at the County Court House, on Thursday, January 9, 1912, at 8.30 p. m. Dr. W. J. Brewster presented a paper on the "Surgical Treatment of Chronic Suppurative Otitis Media." "X-ray in Chronic Lesions of the Skin" was demonstrated with lantern slide, by Dr. C. A. MacMinn. Dr. J. B. Garlick reported a case of "Landry's Paralysis."

PREVENTION OF TUBERCULOSIS.—The Albany Committee on the Prevention of Tuberculosis of the State Charities Aid Association announce that the Tuberculosis Clinic, No. 2 Ash Grove Place, second floor, is open for free consultations on Mondays and Saturdays at 4 and on Wednesdays at 8 p. m. The Clinic also serves as Bureau of Information about Sanatoria for nurses, outfit for outdoor life, equipment of the house for home care, open air school for delicate but not tubercular children.

The tuberculosis nurses may be found either at the Clinic or at the Guild for the Care of the Sick, 390 Madison Avenue. The nurses visit patients in their homes, giving their service to the poor or charging a small fee to those who are willing to pay. It is urged that people in uncertainty about their health should be examined without delay. If they are found not to have tuberculosis, it will be a relief to their minds, if they are found to have it, they will know it in time to be cured.

HOW MINDS ARE SAVED.—Committee on Mental Hygiene Describes Work on the Case of Woman who Feared Insanity but who Suffered from Nervous Exhaustion, Eye-Strain and Overwork.—As an example of the work done by the Committee on Mental Hygiene of the State Charities Aid Association and the work done by clinics for the treatment of mental diseases, Mr. Everett S. Elwood, Assistant Secretary of the Mental Hygiene Committee, described, in a statement issued to-day, one case out of the fifty-two that have come before the committee since February 1st.

First knowledge of this case came to the Association through the Association's pamphlet, "Why Should Anyone Go Insane?"

"I have seen your pamphlet," wrote a woman, "and wish you would send me a copy. I fear a breakdown myself; have more load to carry than one should be able to carry. If there is any way of escape, I mean to secure it."

In her reply to a letter asking for more information, the woman stated her fear of a mental breakdown and described the struggle she was having to support herself and children, having been deserted by her husband several years ago.

Arrangements were immediately made for a careful examination of the woman by an eminent specialist in nervous diseases. He found that her nerves were exhausted from worry and overwork, but that she was sound mentally. He also found that the woman was suffering from a severe eye-strain.

On the advice of the specialist arrangements were made to give the woman a vacation and funds for it were secured. She was also fitted with glasses. As a result of this treatment she now has complete mastery of herself and has laid aside all previous fear of a mental breakdown. She has referred to the committee two other cases in her own community; one, a surgical case, underwent an operation. He is now gradually recovering from a serious case of insanity, which was caused by an injury and consequent pressure on his brain. The other case went to the State hospital voluntarily, and has since been discharged entirely recovered.

As a result of the experience in these cases and many others, Mr. Elwood states that this line of endeavor will be greatly extended in the near future. It also shows in Mr. Elwood's opinion the possibilities of the work of the Committee on Mental Hygiene and how it will grow in any community as soon as it has been established.

THE UNITED STATES CIVIL SERVICE COMMISSION announces an examination on February 20, 1912, to secure eligibles from which to make certification to fill a vacancy in the position of anatomist (male), at \$1,600 per annum, in the Army Medical Museum, Office of the Surgeon General, and vacancies requiring similar qualifications as they may occur, unless it is found to be in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion.

The examination will consist of the subjects mentioned below, weighted as indicated:

<i>Subjects</i>	<i>Weights</i>
1. Normal histology and physiology.....	20
2. Pathologic histology	20
3. Gross pathology (including preparation of museum specimens) ..	20
4. Bacteriology (including care and use of microscope).....	20
5 Photomicrography.	5
6. Training, experience, and fitness.....	15
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Total.	100

Applicants must have reached their twentieth but not their thirty-fifth birthday on the date of the examination.

Men only will be admitted to this examination.

It is desired that the person appointed to this position shall be young, in good health, a graduate in medicine, have a thorough knowledge of pathologic histology, pathology, and bacteriology, be capable of making photomicrographs, understand microscopes, surgical instruments and appliances, and be able to prepare, card, and keep in order museum specimens.

All statements relating to training, experience, and fitness are subject to verification.

In accordance with a recent act of Congress an applicant for this examination will be required to be examined in the State or Territory in which he resides and to show in his application that he has been actually domiciled in such State or Territory for at least one year previous to the date of the examination.

This examination is open to all citizens of the United States who comply with the requirements.

This announcement contains all information which is communicated to applicants regarding the scope of the examination, the vacancy or vacancies to be filled, and the qualifications required.

Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application and examination Form 1312. No application will be accepted unless properly executed, including the medical certificate, and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

PERSONALS.—Dr. GARRETT W. TIMMERS (A. M. C. '97), has left Castleton, N. Y., to engage in practice at Delmar, N. Y.

—Dr. EUGENE E. HINMAN (A. M. C. '99), has returned to Albany after several months spent in post-graduate work.

—Dr. JOSEPH A. COX (A. M. C. '01), has been appointed Major Commander, Second Field Hospital, N. G. N. Y.

—Dr. JOHN H. DINGMAN (A. M. C. '01), after many months spent in post-graduate study, has opened his office at 270 Mill St., Poughkeepsie, N. Y.

—Dr. EDWARD A. STAPLETON (A. M. C. '04), has removed from Johnston, N. Y., to New York City to make a specialty of the nose and throat.

—Dr. EDWARD H. VINES (A. M. C. '05), has removed from 2 Convent Avenue, New York City, to 41 Hocht Avenue, Fort Lee, N. J.

—Dr. BURLIN G. MCKILLIP (A. M. C. '09), is located at 161 Bleecker Street, Gloversville, N. Y.

—Dr. WILLIAM MASON (A. M. C. '10), is assisting Drs. McMullen and Stanton, of Schenectady, N. Y.

—Dr. FREDERICK GARLICK (A. M. C. '11), will leave St. Peter's Hospital, March 1st, to become a resident physician in the Boston City Hospital.

ENGAGEMENTS.—Dr. EDWARD G. WHIPPLE (A. M. C. '04), of Rochester, N. Y., and Miss Delia Thompson, of Malone, N. Y.

—Dr. C. FREDERICK MYERS (A. M. C. '10), of Albany, N. Y., and Miss Louise Helen Gensler, of Albany, N. Y.

MARRIED.—Dr. ROY J. MARSHALL (A. M. C. '10), of Rome, N. Y., and Miss Frances McCarthy, of Cohoes, N. Y., were married January 23, 1912, at Cohoes, N. Y.

DIED.—Dr. GEORGE W. LITTLE (A. M. C. '58), for more than half a century a practitioner of Glens Falls, N. Y., coroner of Warren County for twelve years, physician to the Glens Falls Hospital, died at his home in that city, December 16, aged 76.

—Dr. LESLIE MARTIN (A. M. C. '64), formerly of Lysander and Baldwinsville, N. Y., died in the Gowanda State Hospital, November 30, aged 69.

—Dr. EUGENE M. DRAPER (A. M. C. '73), for many years a practitioner of Ilion, N. Y., died at his home in Pasadena, Cal., December 28, aged 58.

—Dr. ELMER LEWIS FLETCHER (A. M. C. '87), a specialist on the eye, ear, nose and throat, of Eugene, Ore., died at his home, November 10, from heart disease, aged 49.

In Memoriam

CHARLES H. TERRY, M. D.

Dr. CHARLES H. TERRY, a former military and police surgeon, died January 18, 1912, at his home, No. 540 Washington avenue, Brooklyn. He was born in Pike, Wyoming County, N. Y., in 1844, and was educated at Wyoming Academy. He was graduated from the Albany Medical College in 1864 and entered the army as assistant surgeon in the Ninth New York Cavalry and served until the close of the war in the Army of the Potomac.

Dr. Terry then came to Brooklyn and had been surgeon at St. Mary's Hospital since its foundation. He was a police surgeon until last May, when he resigned on account of ill health.

He was a member of the Phi Gamma Delta fraternity, the New York Society of Mayflower Descendants and the U. S. Grant Post. He was also affiliated with many medical societies, belonging to the New York State Medical Society, Kings County Medical Society, Brooklyn Surgical Society and the Brooklyn Pathological Society.

Dr. Terry leaves a wife and three daughters. The burial was in Arlington Cemetery, Washington.

Current Medical Literature**REVIEWS AND NOTICES OF BOOKS**

Surgical Applied Anatomy. By SIR FREDERICK TREVES, F. R. C. S., Sergeant-Surgeon to H. M. the King, Late Lecturer on Anatomy at the London Hospital. New (6th) edition, thoroughly revised. Pocket size, 12mo, 676 pages, 137 illustrations, of which many are in colors. Cloth, red edges, \$2.50, net. Lea & Febiger, Philadelphia and New York, 1911.

Although many additions have been made to and minor alterations effected, in the present edition, this book still retains the spirit, the form and the size given to it by its distinguished author. The chief alterations to the new edition relate to glands of internal secretion, to the lymphatic system, to the anatomy of the abdomen and to new facts which have been discovered by the use of X-rays in examining the human body. The subject matter is arranged in six parts; the anatomy of the various regions of the body is considered in a practical way in its relation to surgery. It is safe to say that there is no other work on this subject which contains an equal amount of information valuable alike to students and practitioners.

G. E. B.

The Treatment of Fractures: With Notes Upon a Few Common Dislocations. By CHAS. L. SCUDDER, M. D., Surgeon to the Massachusetts General Hospital. Seventh Edition, Revised and Enlarged. Octavo volume of 708 pages, with 990 original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Polished Buckram, \$6 net; half morocco, \$7.50 net.

Scudder's "Treatment of Fractures" is too well-known a work to demand an extensive review at this time. The seventh edition differs chiefly from its predecessors in containing those facts which have during the past three years been accepted as important in the treatment of bone injuries.

On account of the increased interest in the operative treatment of fractures, the author has introduced a chapter dealing with that subject. He advises operative treatment only in exceptional cases.

Many new radiographs have been added and the value of the Roentgen ray as an aid to diagnosis and treatment is more than ever impressed upon the reader. It is surprising that stereoscopic radiography and its wonderful possibilities in diagnosis is not mentioned.

The subjects of fracture of the skull, nasal bones, spine, femur and lower tibial epiphysis, excision of the shoulder joint and damage to the musculo spiral nerve have been carefully revised.

J. MCW. B.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic) for 1910. Octavo of 633 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net.

This volume, which is the second, of Collected Papers, by the Staff of St. Mary's Hospital, comprises various publications which have appeared in current medical literature. It contains about thirty separate articles upon diseases of the Alimentary Canal including the Gall Bladder and Bile Ducts. Ten articles treating of the various lesions of the Genito-Urinary organs, seven upon the Ductless Glands, three on Fractures and Diseases of the Head and Neck beside a number of addresses and papers upon general topics. The value of these papers is too well known to require any special comment. The volume contains a complete index of subjects as well as a bibliographic index. It is printed upon excellent paper, is well bound, and contains 633 pages.

G. E. B.

Pathological Technic. Including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. MALLORY, M. D., Associate Professor of Pathology, Harvard Medical School; and J. H. WRIGHT, M. D., Director of the Pathological Laboratory, Massachusetts General Hospital, Fifth Revised Edition. Octavo of 507 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$3.

In the preparation of this edition the authors have included methods which they considered the simplest, most useful and practical; those which have stood the test of time. This may explain why the technique of the opsonic index is not included. The more important additions include bacterial diagnosis of Asiatic cholera, according to the method of A. J. McLaughlin, minute directions for the preparation and use of Wright's blood stain, an improved method of staining blood platelets and giant cells of the bone marrow, Smith's method for staining encapsulated bacteria, the antiformin method for the detection and cultivation of the tubercle bacilli, Musgrave's and Clegg's method for the cultivation of amebae, Wright's method for staining myelin sheaths, a new method for counting blood platelets, Ghoreyeb's method for staining spirochetes, Alzheimer's method for cytological examination of cerebro-spinal fluid. Giemsa's new method of staining protozoa and bacteria, Schriede's modification of Altmann's method for staining cytoplasmic granules, directions for performing the Wassermann and Noguchi tests for syphilis.

Numerous new illustrations have been added. The excellent general arrangement and scope of former editions of the book has been preserved, and it should continue to serve as a vade mecum to the student, laboratory worker, and physician.

T. O.

International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery and the Specialties for Students and Practitioners, by leading members of the Medical Profession throughout the world. Edited by HENRY W. CATTELL, A. M., M. D., Phila., Vol. II. Twenty-first Series, 1911. J. B. Lippincott Co., Phila. and London, publishers. Price \$2.

Among the many illuminating articles in this volume we would mention several as of special interest in the opinion of the reviewer.

"The Cultivation of Medical Plants," by Alice Henkel, Washington, D. C. The authoress cites a couple of our well-known vegetable drugs, giving in detail their method of propagation, soil necessary for their growth and many interesting sidelights on their cultivation which in half a score of cases have become profitable in America owing to the ruthless extermination of the wild varieties. The article is well illustrated. While doubting the ability of the busy physician to gain added revenue from a "materia medica garden" yet her suggestion of such a botanical venture might well constitute an interesting hobby.

"Circumcision: How to perform it under local anaesthesia," by Benjamin H. Beakstone M. D., Chicago. In a well illustrated article the writer describes the ancient Jewish rite and later the several steps in his own method, using a two per cent cocaine solution and performing the operation in his office, the patient getting up and walking home.

"Curious Obstetric Happenings," by C. C. Mapes, Covington, Ky. Certainly a most unique collection of "freak cases" gathered from medical literature and the writer's experience, proving the old adage, "truth is stranger than fiction."

"Some Advances in Obstetrics During the Last Twenty-Five Years," by A. Lapthorn Smith, M. D., Montreal. An article replete with many valuable up-to-date ideas, especially the reference to vaginal drainage, the abandonment of ergot, and the preliminary placing of the perineal stitch.

"The Intravenous Administration of Salvarsan in the Treatment of Syphilis," by B. A. Thomas M. D., Philadelphia. A timely and well illustrated article on this method of administering 606, with remarks on size of dose, contraindications, etc.

H. D. C.

Dorland's American Pocket Medical Dictionary. Edited by W. A. NEWMAN DORLAND, M. D., Editor "Dorland's American Illustrated Medical Dictionary." Seventh edition. 32mo of 610 pages. Philadelphia and London: W. B. Saunders Company, 1911. Flexible leather, gold edges, \$1 net; thumb indexed, \$1.25 net.

The chief aim of the author in the preparation of this book has been to supply the wants of the practising physician no less than those of the student of medicine with as small and compact a dictionary as is

possible. The selection of words has been made as complete as possible, of necessity the definitions of terms are brief but they are clear, adequate and to the point. The present edition has been thoroughly revised and enlarged, many hundreds of new words have been added including terms in nursing dentistry and veterinary medicine thus considerably enlarging the scope of the book. It contains 643 pages, and is bound in flexible leather.

G. E. B.

OBSTETRICS

Edited by James P. Boyd, M. D.

Hydatid Mole.

H. N. VINEBERG. *The American Journal of Obstetrics, September, 1911.*

The subject of hydatid mole has received renewed interest within recent years, since Marchand showed its close relation to chorio-epithelioma.

The frequency with which hydatid mole is followed by chorio-epithelioma has been variously stated by different writers. Bumm in his text-book places it at fifteen per cent, Palmer Findley at sixteen per cent. In twenty cases observed at the Kiel Klinik only two were followed by chorio-epithelioma. Kehrer followed the history of fifty cases of hydatid mole and did not meet with a single instance of this complication. Fraenkel met with only one case in fifteen cases, whose subsequent history he had observed.

The writer has met with eight cases of hydatid mole in which three were attended or followed by chorio-epithelioma. It is difficult to ascertain with any degree of accuracy the proportion of cases of hydatid mole that are followed by chorio-epithelioma because not all cases of hydatid mole are reported. Chorio-epithelioma, on the other hand being a comparatively newly discovered disease, will generally find its way into the literature.

It has been found that chorio-epithelioma is preceded by hydatid mole in about fifty per cent of the cases.

Hydatid molar pregnancy can no longer be looked upon as an innocent condition as it was considered in former years. The consensus of opinion is that we cannot tell whether a given case will be followed by chorio-epithelioma or not.

The writer reports four of his cases.

Case I. Hydatid mole without fetus, eclampsia, recovery. The uterus was emptied by vaginal Caesarian section.

Case II and III. Hydatid mole, followed by chorio-epithelioma, hysterectomy, recovery.

Case IV. Hydatid mole, chorio-epithelioma, double ovarian cysts, hysterectomy, post partum, eclampsia, recovery.

J. A. S.

Combined External and Vaginal Version.

HERBERT M. STOWE. *American Journal of Obstetrics*, Vol. 62, No. 392, 1910.

Treatment of malposition by external version before labor is not as common as treatment of the consequent dystocia either during the first stage or after the cervix is fully dilated. Since the membranes frequently rupture early in such cases, the limitations to internal version in treatment are great.

Scarcity of liquor amnii with consequent difficulty in moving the foetus on one hand and undue mobility because of an excess of fluid on the other are limitations in carrying out external version. "Hypersensitive, obese or rigid abdominal walls" make the procedure still more difficult.

Many malpositions will spontaneously rectify themselves but, in the individual case, "Nature is not to be too blindly trusted" and the patient should enter labor without malposition and possible complications if they can be avoided. The extraction of a full-term breech in a primipara is to be avoided if possible. (In a series of 190 deaths of mature children in labor, extraction by breech was performed sixty-five times.)

With a knowledge of the limitations of external version alone and appreciating that better purchase upon the lower foetal pole may be obtained by inserting several fingers or a hand into the vagina (a principle recognized by Braxton-Hicks and popularized in his combined external and internal version), the author urges a combined external and vaginal version in which four fingers in the vagina applied to the lower uterine segment *around* but not *within* the cervix displace the part not wanted while the external hand directs toward the pelvic outlet the part desired to present. Narcosis may or may not be required depending upon the sensitiveness and elasticity of the parts. Properly adjusted pads and binder assure the longitudinal position of the foetus.

In not introducing the fingers into the uterine cavity and in not rupturing the membranes to maintain the new position, the procedure as urged presents advantages over the Braxton-Hicks version and, since the operator has absolute control over the lower foetal pole, the essential disadvantages of the external version are overcome. Too the procedure can be carried out during the latter months of pregnancy and well into the first stage of labor. The principle has been applied with success to the difficult Schatz method of converting face into vertex presentations and to (marginal) placenta previa.

Because of the assurance of the integrity of the membranes, the dangers of inducing premature labor and of causing accidental hemorrhage from separation of the placenta and asphyxia of the child because of interference with the placental circulation or retraction of the uterus about it, are obviated.

P. T. H.

An Inquiry into the Present State of Our Knowledge of Eclampsia.

J. STUART LAWRENCE. *Surgery, Gynecology and Obstetrics*, Vol. II, No. 4, 1910.

The subject is considered under three heads.

(1) The theory of a general toxæmia is most conspicuously advocated by Tweedy (of the Rotunda). It holds that eclampsia is a toxæmia caused by increased metabolism and correspondingly decreased elimination from pathological causes or from those in the strict sense not pathological; such as constipation and deficient exercise during the pregnant state.

It is claimed that severe headache, vomiting, albuminuria and eclampsia have common cause and the theory is based upon clinical *observation* in which symptoms of eclampsia differ essentially in degree *only* from those of many toxæmias both of the pregnant and the non-pregnant and upon the *pathological likeness* of the lesions of eclampsia to those of ureaemia, yellow fever, phosphorous poisoning and other toxæmias.

That it occurs more frequently in multiple than in single pregnancies, that the birth of the child or its death in utero improves the maternal condition, that the kidney disease subsides and does not tend to recur in subsequent pregnancies and that albuminuria is a constant accompaniment are facts urged in favor of the theory as stated. The treatment that fully appreciates the toxic origin of the condition and aims to relieve it (i. e. the eliminative) is the only satisfactory one at hand.

Little experimental work has been done to further this theory but it constantly gains ground from the work done upon the others.

(2) The placental theory. The discovery by Schmorl of cellular elements in the pulmonary circulation lead to investigations by Veit and others which became broadened by them into the so-called "placental theory" of the origin of eclampsia. The theory holds that syncytial cells containing an inimical toxin of the nature of a ferment, ordinarily combated by an anti-toxin (syncytiolysin), in some unknown manner reach the maternal circulation setting up albuminuria and hemoglobinuria.

The question is raised: is the placenta the cause of thrombosis in the pulmonary circulation where placental cells have been found? If the placenta alone could be shown to cause such lesions, the question could be answered affirmatively. In the efforts to establish the same, the investigators have been led into a search for the particular toxin which has aided greatly in strengthening the theory of a general *toxæmia*.

The albuminuria which Veit induced in rabbits by the injection of placental pulp and which he claimed to be due to the action of a ferment, subsequently shown to be thermolabile, Lichtenstein later produced with milk and eggs (organic) while his results with argilla (inorganic) were negative, proving that the albuminuria was due to unassimilable albumen and not to "syncytiolysis."

Freund produced toxæmia and thrombosis by the injection of coarse placental solution. Later with the injection of filtered placental sera

and that of other glandular organs, he secured poisoning of the central nervous system but rarely thrombosis. Thrombi found consisted of pure fibrin.

Control experiments by Lichtenstein in which concentrated solutions of argilla and chalk were used showed that the thrombosis secured by Freund was due to the mechanical effect of foreign masses in the blood. From Freund's own work it is apparent that sera from other glandular organs than the placenta produce untoward symptoms. The ferment in eclamptic placenta was found by Falk to be intra cellular.

Thrombi when occurring are explained by Hofbauer as being by-products of the autolytic process going on in the liver and kidney. Hemaglobinaeminia and hemoglobinuria are explained by Mohr who extracted an hemolysin from the human placenta. Normally the maternal blood acts as its antagonist, though allowing the liberation of iron to the foetal circulation.

The placenta cannot be accepted as the essential cause of eclampsia for albuminuria, thrombosis, hepatic necrosis and symptoms of poisoning of the central nervous system have been produced experimentally by other media. Chorionic epithelioma is not attended by any signs of eclampsia and cases of puerperal eclampsia are relatively frequent; facts difficult to overcome in accepting the placental theory. It is granted there are a few cases of eclampsia attended by the entrance of placental cells into the pulmonary circulation.

That the placenta does contain toxin inimical to the maternal circulation is accepted and in so much becomes a contributory causal factor in eclampsia. The toxicity of the liquor amnii in eclampsia has been established by Albek. From experiments with human eclamptic sera, properly controlled, Graf and Landsteiner conclude that the blood in eclampsia is much more toxic than the normal blood but that this toxicity is not peculiar to eclampsia (sera from the blood in uraemia, acute and chronic nephritis, and asthma producing experimentally similar though not exact results). These facts add apparent strength to the theory of a general toxæmia.

(3) The theory of a functional abnormality of the glands of internal secretion, with special reference to thyroid insufficiency.

Though essentially of Italian origin, this theory is ardently championed by Massini (Brazil) who presumes there is a toxin in the maternal blood during pregnancy that becomes on occasion pathological; there should be some organ whose function it is to counteract such action; the thyroid has been proven antagonistic to metabolic poisons; then by the insufficiency of this organ a toxin, probably identical with that of Vit. becomes so considerably increased as to cause the eclamptic onset.

To bear out his theory of thyroid control, the organ was removed from fifteen pregnant bitches, in most cases completely, in a few partially. "Eclampsia" resulted in all but two cases, one of which was found later to be non-pregnant.

On the other hand, that the removal of the thyroid results in eclampsia has been denied. Seitz removed the parathyroids and got tetany but no eclampsia and insists that the convulsions of tetany may have been confused with those of eclampsia. Since the parathyroids may have been removed in the earlier experiments mentioned, the conclusions logically drawn from them may be of less value.

It is the author's belief that future work will be directed toward establishing the thyroid as the antagonist of a general toxæmia to which a toxin from the placenta contributes.

P. T. H.

The Renal Activity in Pregnant and Puerperal Women as Revealed by the Phenosulphonephthalein Test.

F. C. GOLDSBOROUGH and F. C. AINLEY. *Journal of the American Medical Association, Vol. 55, No. 24, 1910.*

In an effort to show some characteristic change in the functional activity of the kidneys in certain cases of toxæmia, the writers subjected a number of normal pregnant and puerperal patients to the phenosulphonephthalein test preliminary to applying it in diseased conditions.

The work was suggested by the experiments of Rountree and Geraghty (*J. Pharm. and Exp. Therap.*, July, 1910), in which phenosulphonephthalein was used to determine the functional activity of the kidneys and by them considered greatly superior to methylene blue and other substances used for similar purposes.

The method employed was the same as that of the original investigators: a definite quantity of phenosulphonephthalein given subcutaneously; the time of the first appearance in the urine noted by means of a color reaction with sodium hydrate; the percentage eliminated for different periods of time determined by comparison, by means of the colorimeter, with a standard solution. More importance is placed upon the amount eliminated for a definite time than upon the time required for the total elimination.

Summarized, the results of Rountree and Geraghty in normal, non-pregnant cases were as follows:

First appearance of drug in urine—five to ten minutes.

Elimination during first hour—forty to sixty per cent of drug.

Elimination during second hour—fifteen to twenty-five per cent of drug.

Summarized, the results of the writers were as follows:

(1) in normal pregnant cases,

First appearance—14.6 minutes (average).

Elimination first hour—21.3 per cent (average), the highest individual cases being below the lower limit in the normal, non-pregnant.

Elimination second hour—26.5 per cent (average), (in the non-pregnant being but one-half that for the first hour)

Total elimination—47.9 per cent (average), differing from a total elimination of seventy per cent in the non-pregnant.

(2) in normal puerperal cases,

First appearance—ten minutes (average).

Elimination first hour—thirty-five per cent (average), below the minimum in non-pregnant.

Elimination second hour—twenty-five per cent (average), above the maximum in non-pregnant.

Total elimination—sixty-one per cent (average).

Experiments carried out upon the same patients during pregnancy and the puerperium bear out the above figures in general.

Summarized, the results show that the average time required for the drug to appear in the urine is longer in pregnancy than in the puerperium and that both the percentage eliminated during the first hour and the total elimination are less in pregnancy than in the puerperium (and much less than in the normal non-pregnant state). The foregoing facts are accepted as an indication of diminished renal activity in normal pregnancy.

No explanation of the diminished power of elimination is offered and, until more extensive observations are at hand, caution is urged in drawing conclusions from the tests should phenosulphonephthalein be applied in toxæmic conditions of pregnancy.

P. T. H.

Has Ovotherapy, as Now Practiced, an Experimental Basis?

ROBERT T. FRANK. *Archives of Internal Medicine, September, 1910.*

The author states that our knowledge of the function of the corpus luteum is limited to a few isolated and disjointed facts. The minority are based on reliable experimental data and the majority are insecurely founded on clinical observation, which permit of widely different interpretations. Microscopically, the corpus luteum has the appearance of an extremely active gland which has a probable important function.

The writer attempted to ascertain:

First. The principal pharmacological effects of the intravenous injection of extracts of corpus luteum.

Second. If corpus luteum injection can replace the normal secretion of the gland after removal of the ovaries.

Third. The effect of corpus luteum injection on the hypophyses of castrated animals.

In the first series, dogs were injected, intravenously, with dog's corpus luteum extract and also sheep and rabbits were injected with sheep's corpus luteum extract. The results of the injection of massive doses of this extract caused intravascular coagulation without any well marked pharmacological effect.

In the second series the extract was administered subcutaneously or by mouth, or a combination of both methods were employed because it could not be safely given intravenously. Rabbits and guinea pigs

were used and the extract was made from the fresh corpora lutea of sows. He demonstrated that the extract thus employed did not replace the normal activity of this gland in castrated animals as determined by the histological study of the uteri of the animals experimented upon.

In the third series he demonstrated that it did not cause any recognizable reaction of the hypophysis.

The results of his experiment were negative and he believes that the great variation in the results of the use of ovarian extracts are due equally to the subjective impressions of the physician and of the patient. The symptom most frequently relieved by ovotherapy is the so-called flush (sweats, dizziness, etc.), of the natural and artificial menopause. These vaso-motor disturbances, most often noted in neurotic women persist for a shorter or longer period; may disappear in response to appropriate or inappropriate treatment, and are, therefore, entirely unsuitable as a reliable index for judging the efficacy or potency of any drug.

In the further study of the corpus luteum our efforts should be directed toward exact experimental proof rather than toward empirical generalization.

P. T. H.

Present Status of the Colon Tube.

H. WELLINGTON YATES. *American Journal of Obstetrics.* Vol. 62, No. 395, 1910.

The utilization of the colon tube was based upon the belief that the colon could be reached by passage through the rectum and sigmoid. Doubt of its utility as such is a matter of comparatively recent years. Doubt of its efficiency seems first to have been raised by certain Germans and by others of them its value has been strongly urged. Schule's radiograph (1904) proved the barrier the sigmoid offers to the passage of the colon tube further upward. The experiments of recent years have demonstrated that in a "normal individual seldom if ever does the colon tube pass upward into the descending colon."

In the writer's efforts to establish the practical value of the colon tube, various "flexible instruments" such as bougies, catheters, etc., in addition to the ordinary tube, were passed with the patient in such positions as he commonly would assume while ill. In the series of radiographs with which the writer supplements his investigations, it is noted that in not a single instance did the tube pass the sigmoid.

In explanation of the failure of the procedure the writer suggests: the frequent changes in curvature of the rectum, the sphincter-like junction between the rectum and the sigmoid; and the long mesosigmoid permitting considerable upward displacement of the sigmoid and leading to the incorrect conclusion that the instrument is following the lumen of the gut.

The writer adds a series of radiographs demonstrating the efficiency of the Murphy method of instillation of saline where the tip of the instrument is inserted but a few inches; results being attained similar to those sought for in the earlier passage of the "colon tube."

While the fluid (one quart of bismuth mixture) was injected in both the Sims' and the Fowler's positions, the radiographs in all but one instance were taken in the horizontal position several minutes after injection and all show well marked shadows throughout the colon. A radiograph taken in the Fowler's position ten minutes after the injection, in the same position, of one quart of the mixture is significant in demonstrating the presence of the fluid in the cecum. The writer asserts that neither gravity nor pressure can wholly explain the phenomena and he believes that reverse peristalsis may be reasonably assumed to explain the ability of the bowel to carry fluid injected upward, "keeping it in contact with the mucous surface long enough to promote absorption."

P. T. H.

The Treatment of Eclampsia.

BARTON COOKE HIRST. *American Journal of Obstetrics.* Vol. 62, No. 393, 1910.

Basing his figures upon the probable census and birth rate and upon a mortality in general practice of about thirty-three per cent, the writer is lead to believe that over 1,400 lives were lost by this disease in the United States last year. Since the mortality "can and ought to be kept below ten per cent," the writer observes that the lives of over a thousand of our women are unnecessarily sacrificed each year, and urges attention to the treatment of a "common disease" that more satisfactory results may be insured.

Eclampsia can almost always be prevented by the interruption of pregnancy when there is a blood pressure of 180 which cannot be reduced by active anti-toxaemic treatment. Blood pressure of over 150 in the latter half of pregnancy invariably indicates toxæmia.

In the active treatment of the condition the essentials urged are: washing of the stomach and the colon; purgation by castor oil and croton oil by stomach tube if necessary, to be followed by two-dram doses of Epsom salt solution if the patient is able to swallow; diaphoresis by the use of the "sweat cabinet" for thirty minutes every four hours; hypodermoclysis of one quart of saline and rectal instillation of the same amount between sweats; and venesection to the amount of sixteen ounces when the blood pressure is over 180.

Veratrum viride and nitroglycerine are given to supplement the eliminative treatment. The unimportance of chloral and chloroform to control the convulsions is urged.

Of especial interest is the writer's objection to any form of accouchement force in terminating the pregnancy since it "adds to the risk and increases the mortality."

Experience with over 260 cases in which both plans were followed has convinced the writer that puncture of the membranes most effectually reduces blood pressure. This procedure, combined with active eliminative treatment, is followed within eight hours as a rule by spontaneous labor.

The eliminative treatment is not to be discontinued within a week after convulsions have ceased.

P. T. H.

On Caesarean Section in the United Kingdom.

AMAND ROUTH. *Journal of Obstetrics and Gynecology of the British Empire*, Vol. XIX, No. 1, January, 1911.

The author's report is based upon the observations of over one hundred present-day operators, covering 1,282 cases of Caesarean Section and was presented at the International Obstetrical and Gynocological Congress at St. Petersburg in September, 1910.

The indications for the operation which have become gradually extended are summarized as (a) Obstructions to Labor, (b) Uterine Hemorrhage and (c) Constitutional Crises.

(a) Of obstructions to labor, that caused by pelvic contractions is treated at greatest length.

Given a vertex presentation (natural or as a result of version) and no apparent disproportion, the usual line of treatment is the induction of premature labor at or after the 35th week; otherwise, with the patient's consent, allow to go to term and to Caesarean section.

At full term or in labor, where the possibility of infection can be eliminated, Caesarean section is to be done if the child is alive. Pubiotomy or symphysiotomy is offered as an alternative if the head is well engaged and apparently needs but little more room for passage—"a course adopted by few owing to the large post-operative morbidity."

"Septic Cases." From data, it is apparent that cases frequently examined or exposed to previous attempts at delivery are infected and are to be treated as such.

In infected cases craniotomy with irrigation first of the amniotic and (after the third stage) of the uterine cavities is the safer operation. To prevent craniotomy upon the living child, Maxwell has suggested irrigation of the uterine (amniotic) cavity and foetus in suspected cases with ruptured membranes or preliminary to Caesarean section when there is no virulent infection present. The author emphasizes the importance of hurried bacteriological examinations of "uterine swabbings" in furnishing positive or negative evidence of such infection.

Because of the post-operative morbidity of hebosteotomy and extra-peritoneal Caesarean section the choice of operation in septic cases seems to lie between craniotomy, with some such precautions as described and Caesarean section, in which the abdominal cavity is carefully guarded,

with or without hysterectomy depending upon the presence or absence of virulent infection. In general practice, the former is the operation of definite choice. The great advantage of the latter procedure is the probability of a living child.

As a substitute for Caesarean section with hysterectomy, Sellheim has advocated the utero-abdominal fistula operation in infected cases.

The extro-peritoneal Caesarean section is not looked upon with favor in infected cases because of the post-operative morbidity due to sepsis, lacerations, fistulae, etc., the especial disadvantages occasioned being the lowered resistance of the stripped-off peritoneum, the contact with cellular connective tissue and the artificial displacement of the bladder.

The treatment of obstruction to labor by fibroids is essentially expectant. The large majority even of pelvic fibroids are drawn up into the abdomen or undergo such "softening and flattening" as to give no real difficulty in delivery. In the absence of pressure symptoms or those of degeneration, the patient should be encouraged to go to term, resorting at labor to Caesarean section followed by myomectomy or by hysterectomy as indicated.

Obstruction from cancer of the genital passages. Operative cancer of the cervix early in pregnancy is to be treated by pan-hysterectomy; at full term by Caesarean section and pan-hysterectomy. In the inoperable variety seen early, the pregnancy is allowed to go to term and Caesarean section with radical hysterectomy done; at term, Caesarean section followed by supra-vaginal hysterectomy with extra- or intra-peritoneal treatment is urged.

Obstruction from ovarian tumors. Caesarean section is indicated only when the obstructing pelvic or lower-abdominal tumor cannot be removed by postural or other prophylactic treatment and when for any reason removal by the abdominal or vaginal route preliminary to delivery is impossible or undesirable.

The same general rules are applied to other pelvic tumors which are commonly more fixed (than ovarian tumors) and therefore more certain to demand operative interference.

Other pathological conditions for which Caesarean section has been done are cervical and vaginal stenosis, previous ventro fixation, tonic and hour-glass contractions of the uterus, missed labor and prolonged gestation.

(b) Caesarean section for uterine hemorrhage. In concealed accidental hemorrhage, the great maternal mortality is due to the inability of the uterus to contract after being emptied. With gradually increasing symptoms, Caesarean section with hysterectomy is preferable to vaginal operation since the former can be carried out speedily and, pending the removal of the emptied uterus, hemorrhage more readily controlled. In placenta previa Caesarean section has indication only in the very exceptional cases of the central variety, seen near term and with a rigid cervix—a combination of circumstances which is most improbable.

(c) Caesarean section for constitutional crises. In general, the view is held that eclampsia is not to be treated by emptying the uterus at once after the appearance of the first convulsion. But few cases have been treated by Vaginal Caesarean section and these have been attended by an unusually high mortality. By some the latter operation is considered 'a possible alternative to other methods of rapid vaginal delivery' while the classical Caesarean is less favorably considered though the author states that "if it be true that spontaneous or artificial delivery is beneficial to the patient, and if in a given case it is desirable to empty the uterus with a rigid, undilatable cervix, it is probable that the most rapid and least injurious and disturbing method—at all events in a hospital—would be by abdominal Caesarean section." P. T. H.

Legal Aspects of Post-Mortem Caesarean Section.

CHARLES S. BACON. *Surgery, Gynecology and Obstetrics*, Vol. XII, No. 2, February, 1911.

The 'lex regia' of Numa Pompilius provided that the child be removed from the pregnant mother at her death. Though still existing with but little change in some European countries, notably in Austria and in Bavaria, Württemberg and in Saxony, there are in this country no statutes or common law decisions on the subject. Similarly, though our 'abortion laws' provide punishment for violation, the foetus itself has 'no distinct status with recognized rights.'

Since the chief difficulty the physician will encounter in carrying out the operation is the possible objection of surviving relatives, it is of the utmost importance that the death of the mother be determined quickly and with certainty; for the right of the relatives to determine whether or not an operation is to be done ceases at death, when consent to operation is no longer needed. It is because of the difficulty in determining in certain cases whether death has certainly occurred that the decision to operate involves considerable responsibility.

Of almost equal importance is the question of life or death of the foetus. If the foetal heart sounds are heard just before or at death, experience has shown that foetal life may be expected to continue for from fifteen to twenty minutes after maternal death. This presumption is of importance because of the difficulty which may be experienced in hearing the sounds distinctly.

The writer is of the opinion that the procedure should be carried out even though the evidence of foetal life is not positive "for the same reason that we try to resuscitate an asphyxiated new-born child or a person apparently drowned."

A third question raised is that of the viability of the child. Such consideration would limit the operation to cases in which pregnancy has advanced at least twenty-eight weeks.

That the mother is dead and that the foetus of at least seven months is probably or possibly alive seem to the author all that is needed in "establishing a rule of practice or a legal mandate." P. T. H.

Caesarean Section for Impassable Contraction Ring.

ROBERT L. DICKINSON. *Surgery, Gynecology and Obstetrics, Vol. II,*
No. 4, October, 1910.

The author is convinced of the necessity for a standard of agreement as to the methods of relief of obstruction from the soft parts similar to that already arrived at for obstruction due to the bony canal. He is impressed with the scarcity of the literature upon the subject of contraction ring dystocia.

There are recorded six cases of section for contraction ring obstruction. Each case but one (the details of which are not obtainable) was a hysterectomy and was accompanied by some additional obstetric complication; three of the mothers died. The author records four deliberate sections after obstruction had been diagnosed; in two of the cases which had been subjected to preliminary, though careful, instrumentation the mothers were lost.

Laparotomy must be considered in overcoming this obstruction, located more remotely than any other from the outlet, and the Caesarean operation seems warranted under the following conditions: when relaxation of the ring under morphia, anaesthesia and under skillful manual dilation have failed, when the child's prospects of being born alive are good, when the patient is a satisfactory risk and when she and the husband request that 'a somewhat greater risk to the mother be assumed for the sake of obtaining a living child in lieu of embryotomy.'

Infrequency of the condition is not to be judged by the scarcity of reported cases (less than 100 are recorded) but probably is due to lack of routine search in all cases of second-stage delay when the ordinary cases of obstruction have been eliminated.

The 'contraction (or retraction) ring' marks the lower edge of the muscle of the body of the uterus; its presence is physiological; when over-active or irregularly active it constitutes an obstruction to labor, how serious an obstruction depending upon the strength of the 'driving power above and of the spasm below.'

The 'ring' may be either a circle or a crescent, oblique or horizontal; physiologically it develops at the pelvic inlet, pathologically at higher levels; it may develop in advance of the presenting part or clasp tightly the child's body, commonly about the neck and shoulders.

In the reported cases, one-third of the mothers and one-half of the children died. The great importance of relatively early recognition of the condition as affecting the maternal mortality is urged.

The treatment outlined is as follows:

- (a) Relaxation by rest, by narcotics and by anesthesia.
- (b) Dilatation by hand, by bags; and by traction, in head cases by forceps, in breech cases on foot or groin, and in transverse cases by version.
- (c) Embryotomy when the above fail.
- (d) Caesarean section with or without removal of the uterus.

The author's views are based on personal experience and a review of the available literature on the subject.

P. T. H.

ALBANY MEDICAL ANNALS

Original Communications

PROGRESS IN SYPHILOLOGY.

Read before the Rensselaer County Medical Society, February 13, 1912.

BY HARRY S. BERNSTEIN, M. D.,
Albany, N. Y.

It is noteworthy that the etiology of a disease which is as old as the history of man, has been definitely determined within our own time. As early as B. C. 2637, the symptoms of venereal disease including those of syphilis were recorded in Chinese medical lore. Then, too, the Hebrew Scriptures abound in many references, such as the "emerods in secret parts," the "scab," and the unclean man with a "running issue out of his flesh." These leave little doubt in the mind of the medical reader as to possibilities. The orgies which flourished under the guise of religion in Assyria, Asia Minor, and in Rome, likewise enhanced these possibilities. Venereal lesions escaped critical observation, however, until Hippocrate's work on ulcers of the foreskin, which appeared about B. C. 400. Paulus Aeginata also published clear accounts of venereal conditions about A. D. 650; and although the ancients did not recognize clinical entities, hard and soft sores were differentiated and a distinct etiology suggested by Rhazes about the end of the ninth and beginning of the tenth century. Then came the pandemic of syphilis which broke loose all over Europe and spread to the Orient about the end of the fifteenth century. The epidemic with its malignant types and high mortality made great impression on the writings of that period. It has also been believed that as a result of its universal spread, a passive immunity has been transmitted to us,—a less sinful posterity. The etiology of the three venereal diseases was now hopelessly confused. Astruc formulated a theory that the virus was the same and that the infection of a secreting or non-secre-

ing surface determined the character of the lesion. John Hunter concludes from a series of self-inoculations lasting three years that "the matter from a gonorrhoea will produce chancres." Bell, in 1793, produced a chancre on a secreting surface by inoculating the urethra with syphilis. This experimental evidence tended to disprove Hunter's theory and was confirmed by workers of the early part of the nineteenth century.

The chancre as a manifestation of syphilis was now accepted. Then followed an age of speculation regarding the etiological factor. Hallier, in 1869, announced the first cause of syphilis. In 1884, Lustgarten reported the occurrence of an acid-fast bacillus in all of the sixteen cases of primary sores examined. The bacillus could not be cultivated. Lustgarten's observation that the organism occurred in the tissues was never confirmed. One year later, Alvarez and Tavel described the smegma bacillus. This organism bore so much resemblance to the one described by Lustgarten that there is little doubt about the identity of the latter. Further discoveries of the cause of syphilis were made. These included a cladothrix, a flagellate, a pleomorphous bacillus and an aspergillus. Lassar, speaking in 1905, stated "one hundred and twenty-five causes of syphilis have been established during the last twenty-five years." In May, of that year, 1905, Schaudinn and Hoffmann reported the findings of a characteristic organism, the spirochaete pallida, in syphilitic lesions. It was present "in the primary sore of seven cases examined, in the anal papules of one case, in the genital papules of eight, in two closed primary lesions of the skin of the penis, in inguinal buboes in twelve cases, and once in the splenic blood." Control examinations of soft chancres were negative. Six months had scarcely elapsed before confirmatory reports were made by observers the world over. The organisms were seen in the primary, secondary, and tertiary lesions of syphilis as well as in the blood, both circulating and splenic. Bandi and Simonelli found them in blood taken from roseolae and Levaditi and Petresco found them in fluid of blisters produced upon the skin. Similarly the organs of congenital cases contained myriads of the spirochaete.

The association of the spirochaete pallida with the varied syphilitic lesions caused their presence to be regarded as diagnostic of the disease. As the name implies, the organism is a long, nonrefractile, spirally curved body. It is

4 μ to 20 μ in length, and pointed at both ends with flagella-like prolongations. It possesses four to twenty sharp, deep spirals. The large number of spirals in relation to its length is quite characteristic. It is, moreover, a motile organism, showing rotation on its long axis, quivering movements up and down the spiral, and forward and backward flexion. A frequent concomitant of the spirochaete pallida is the spirochaete refringens. The latter is a member of the same genus, and is longer, thicker, and more refractile than the former. The spirochaete refringens has also a coarser contour, and irregular, wide, flat spirals. This organism is found not only in syphilitic lesions, as indicated, but also in the mouth of normal individuals, in Vincent's Angina, and in ulcerating cancers. Differentiation between the spirochaete pallida and refringens is, therefore, of much diagnostic importance. Simple laboratory procedures have been devised for the detection of the spirochaete pallida in smear preparations. It is necessary to cleanse the lesion thoroughly with normal salt solution from any exudate and make the smears from the serum obtained by pressure or curetting. The smears may then be stained by Wright's or by Giemsa's method. Within the last two years Burri's "India Ink" and Ghoreyeb's "Osmic Acid" methods have appeared and their simplicity ought to recommend them to practitioners. The former method requires that a loopful of serum be mixed with a loopful of India Ink, preferably the "Chin chin" variety. It is then spread on a slide, and examined, without mounting, under an oil immersion lens. The organisms are unstained on a black background. Barach has issued a warning against this method; for certain inks contain fibrils which closely simulate the spirochaete pallida. Examination of a drop of serum from a lesion by the "dark-ground illuminator" offers a ready and accurate means for observing the living organisms. Workers are agreed that the organisms may be seen by the "dark-ground illuminator" in numbers whereas smears from the same source show few or none. In examining smears from lesions of the mouth, it is well to recall the presence of the spirochaete dentium, a nonpathogenic form, the normal habitat of which is the mouth cavity. In morphology, it is closely similar to its pathogenic ally.

Successful experimental work with animals dates from 1903. Metchinkoff and Roux succeeded then in producing a typical

chancre on the genitals of a chimpanzee, twenty-six days after inoculation. Thirty days later secondary symptoms developed. In the lower monkeys a primary lesion is obtained if the injection is made on the eyelid or cornea, but no secondaries appear. After the discovery of the spirochaete, two years later, Metchinkoff identified the organisms in his experimentally produced lesions. It is interesting to note that subcutaneous, intraperitoneal, and intravenous inoculations, even with most virulent material, fail to produce a lesion. Only deep epidermal inoculation is effective. The assumption is made, therefore, that the organisms must first multiply in the epidermis before spreading generally; and that the activity of the leucocytes make other methods of inoculation ineffective. Yet subcutaneous injection with syphilitic virus, although failing to produce a lesion, has developed immunity. For the same monkeys, when given a deep epidermal inoculation, were similarly free from any reaction. That local immunity occurs is also evidenced by the fact that two weeks after the first inoculation with syphilitic virus, a secondary inoculation is without avail.

Now the syphilitic virus can be transmitted from one monkey to another. In its course, it requires less time for the production of the chancre, so that after fifteen passages, it requires but seven days for a lesion to manifest itself. This period cannot be reduced and the virus is then said to be "fixed." If a chimpanzee be inoculated with this "fixed virus" it will show only local reddening and glandular hyperplasia. No chancre or secondaries will appear, and such an animal will be immune to virulent human material.

The infectiousness of the blood of syphilitics was demonstrated by Hoffman in two interesting experiments. He produced chancres in the monkey by inoculating the skin with human blood taken forty days and six months after the appearance of the primary lesion. It may be also mentioned that the site of inoculation in the monkey when treated several hours afterwards with calomel ointment showed no chancre. This confirms experimentally the therapeutic experience of years with mercury. An important advance in experimental syphilis was marked by the work of Bertarelli and Schucht. These investigators, in 1906 and 1907, successfully produced syphilitic lesions on the iris and

cornea of rabbits. The process was only local, there being no general involvement.

The study of syphilis was indirectly influenced by the phenomenon of complement fixation, observed by Bordet and Gengou in 1901. For at the time when rapid progress was being made in inoculation experiments, Wassermann, Neisser, and Bruck first published, in May, 1906, a method of detecting the antibody in the blood serum of syphilitics. Their method was simplified by Noguchi in 1909. Medical literature for the past five years has contained the records of workers with this test all over the world. The test has now found general acceptance and its particular value lies in aiding a diagnosis of latent syphilis. Our experience at the Bender Hygienic Laboratory with this test for the past three years has emphasized some of its limitations. This holds particularly true of primary syphilis. At this stage, positive results vary from 98 to 38 per cent of cases examined. This difference can be accounted for by the fact that insufficient time has elapsed to permit the development of the antibody in the circulating blood. In the diagnosis of typhoid fever, a similar limitation is encountered. Agglutination of the typhoid bacilli is only obtained on the seventh to the tenth day after the onset of symptoms. Therefore, in atypical primary lesions of syphilis or in mixed infections an initial negative serum reaction is inconclusive unless it be controlled by another test after an interval of one to two or three weeks.

To illustrate the importance of this fact, it may not be amiss to quote three recent cases. The first case is that of a male who ten days after coitus noticed the appearance of venereal lesions, including a hard chancre. Three weeks later, a serum reaction was negative. A second reaction, done twenty days thereafter, proved strongly positive. The next day there suddenly appeared a macular eruption and mucous patches. The second case is that of a physician who presented an extra genital lesion, accidentally acquired, of about ten days' duration. The reaction was negative and one week later became strongly positive. The third case is that of a student who showed an ulcerating lesion involving the right tonsil. It was accompanied by fever, malaise, and local glandular enlargement. There was no history of exposure. Smears from the curettings revealed only the presence of the spirochaete refringens. The serum reaction was negative: two

weeks later it was also negative. The lesion gradually cleared up without the administration of mercury, and thus far, twelve weeks after the second negative test, there has been no evidence of syphilitic lesions. The clinical course of the lesion has, therefore, confirmed the nonsyphilitic character of the infection, as indicated by the two negative tests.

Of late, much has been written concerning the effect of mercurial treatment on the serum reaction. The consensus of opinion is that a positive reaction is indication for further treatment, but that a negative reaction does not necessarily imply that the case is healed. The reaction may, at times, be quickly influenced by treatment. Salvarsan exerts a similar influence. This has led to a quantitative determination of the syphilitic antibody. Without going into the details of the technique, it may be stated that one capillary drop of serum is used in the test. We have found that amounts varying from one-half of a capillary drop to one drop in strongly positive sera will fix the complement; and it has been suggested that in cases under treatment, two capillary drops of serum be used in order to make the test more sensitive. This we believe to be of great advantage. A case to illustrate the value of this procedure may be given. An adult male, three months after the appearance of a primary lesion, presented himself for the test. He had received intramuscular injections of mercury. With one drop, the serum reaction was negative; with two drops it was positive. It certainly would have been erroneous to draw conclusions from the findings with one capillary drop, and yet enough antibody was present in two drops to indicate more treatment.

In congenital syphilis, the reaction is apt to persist despite vigorous treatment. A young man of twenty with a congenital perforation of the soft and hard palate responded positively, notwithstanding the fact that he had been on a lifelong mercurial diet.

Serum diagnosis has in many instances cleared up doubtful histological pictures. Chronic perivascular inflammations, associated with necrosis, in ulcerating lesions have suggested that the serum test be done. Positive reactions have served to throw light on the unsuspected etiology.

The complement-fixation test is also applicable to the cerebro-spinal fluid. It has been observed, however, that the antibody

content of the spinal fluid is inconstant; so that only about sixty per cent of the cases react positively. But in cerebrospinal syphilis the globulin content of the fluid is increased and is of constant occurrence. This increase can be detected by the Butyric Acid reaction of Noguchi and by the Nonne reaction. Both of these simple and valuable tests were published in 1909. In addition, the cerebrospinal fluid lends itself quite readily to a numerical count of the cellular elements as well as to the study of its cytology by smear preparation.

In January, 1910, Ascoli and Izar applied the Meiostagmin reaction to the diagnosis of syphilis. By means of the stalagmometer, it is determined whether the surface tension of a mixture of a specific antigen and a serum containing the corresponding antibody is lowered. The test is essentially a physical test, and is influenced by many factors. Thus far the Meiostagmin reaction has only had restricted application.

Therapy in syphilis has gained considerable momentum with the announcement of Ehrlich's remedy in 1910. The literature of the past year indicates the critical observation to which "606" has been subjected. It has also been successfully applied to the treatment of Yaws. This disease is due to the spirochaete pertenuis which is morphologically similar to the spirochaete of syphilis; and the susceptibility of both organisms to the action of "606" suggests generic relationships.

It will be recalled that the spirochaete pallida has been consistently found in lesions of syphilis; that the monkey and rabbit has been inoculated with syphilitic virus; and that the spirochaete pallida has been recovered from these experimentally produced lesions. Before this organism, however, can be accepted as the etiological factor in syphilis, it must be artificially cultivated and the pure cultures must be capable of producing the disease when inoculated. Then, will all the postulates of Koch be fulfilled.

Scheres-chewsky, in 1909, was the first to attempt the cultivation, but did not obtain the organism in pure culture. He was followed by Muhlens in 1910, and Hoffmann in 1911; but the organisms they succeeded in cultivating were not pathogenic for animals. In June, 1911, Noguchi published in the *Journal of Experimental Medicine* "A Method for the Pure Cultivation of Pathogenic Spirochaete Pallida."

The author employed a medium which consisted of serum water (sheep, horse, or rabbit) and a piece of sterile tissue. The

medium is inoculated with testicular tissue from the rabbit, which has been previously injected with human virus. Other investigators have inoculated culture media direct from human syphilitic lesions. The rabbit testicle, at the end of two to four weeks after inoculation, becomes much swollen and the spirochaete pallida are present in large number. In this manner, a constant supply of spirochaete is obtained. The culture tubes are then incubated in a jar under strict anaerobic conditions. These are insured by a combination of hydrogen gas, vacuum, and pyrogallic acid. The organisms begin to multiply at the end of forty-eight hours and grow slowly for weeks. At the end of ten days, they manifest their typical curves and motility. The first culture obtained had reached its twenty-fifth generation at the time of the publication. Two pure cultures produced typical lesions when injected into the testicles of the rabbit. The testicles at the end of about four weeks, were excised and showed the presence of the spirochaete in smear and microscopic section.

Two months after the issue of Noguchi's work, Hoffmann published his results in the *Deutsche Medizinische Wochenschrift* for August 24, 1911, on "The Injection of Rabbits with Syphilis from Pure Grown Human Cultures of Spirochaetes." The work of Noguchi and Hoffmann has, therefore, within our own time established beyond question the etiological relationship of the spirochaete pallida to syphilis.

The ability to cultivate the organism offers unlimited opportunity for productive research in the future. The more recent concepts of immunity in regard to active immunization, production of agglutinins, and of specific vaccines may be applied.

There will, consequently, be much gained in the control of this great social and economic evil.

THE MALIGNANT RENAL TUMORS OF CONGENITAL ORIGIN OCCURRING IN CHILDHOOD — WITH REPORT OF TWO CASES.

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Considering pathologic lesions in their entirety, primary renal neoplasms are of comparatively rare occurrence. Küster, analyzing the records of 37,000 autopsies reports only 223 primary renal conditions, 23 of which consisted of kidney tumors. Kely-

nack, reviewing the records of 4,500 post-mortems was able to discover only nine primary renal growths. The comparative rarity of primary renal conditions in general and kidney tumors in particular is at once apparent from the above records.

Up to the year 1883 the subject of renal tumors from a pathologic standpoint was ill defined, the history of these growths being without systematic classification. To Grawitz, in this year, belongs the credit of first recognizing the adrenal origin of certain of these growths, whence has come the study and consideration of the so-called hypernephromata.

It was not until Birch-Hirschfeld, in the year 1898, studied a second group of tumors that the entire subject of renal neoplasms was placed upon a rational and scientific basis. Growths that heretofore had been loosely classified under a variety of names were definitely placed by this investigator in a category by themselves. To this classification Birch-Hirschfeld gave the name embryonal adenoma. Under this heading we find that various authors at different times have reported apparently the same class of tumor growth. Various names have been employed, such as carcinoma, sarcoma, adenocarcinoma, myxosarcoma, rhabdomyosarcoma, endothelioma, teratoma, etc. In reality, excluding carcinoma, which are extremely rare, we may regard the mixed tumor of embryonic origin and the sarcoma as the only true primary renal neoplasms. Cases of pure renal sarcomata have been reported but they are so few in number that it is a question as to whether we should regard them as a distinct entity. From the clinical standpoint this would seem a rather startling assertion for it has long been the custom to refer in a general way to the class of renal tumors occurring in children as sarcomata.

It has long been a clinical observation, supported by pathologic evidence that a large proportion of this class of tumors occurs during the first decade of life. A second fact, namely, that the early part of the first decade of life is chiefly affected by this condition, where the latter exists is also well known. Rosenstein, in a series of 548 cases, reports 30 per cent occurring during this period. Steffen, in a series of 219 cases, gives the following statistics: 34 occurred during the first year, 55 during the second year, and the sum of those occurring during the first five years was 168 out of the total of the 219 cases previously mentioned.

Hoisholt, quoted by Borst, reports a case occurring during the eighteenth year, mentioning this case as the oldest age at which this lesion has been found. Henoch, quoting Semb, reports a case occurring at birth, while Weigert and Paul, quoted by Borst, have reported cases occurring both at birth and in the foetus. Such examples as these however are rare and unusual.

Heinecke, quoted by Strong, is authority for the statement that out of a series of 138 cases the majority occurred between the second and third years. The same author reports only single cases from the sixth to the ninth year in the same series.

The type of renal tumor with which we are concerned presents from the pathologic point of view the following distinguishing characteristics: 1. Diversity of histologic structure of the neoplasm itself. 2. Invasion and replacement of renal parenchyma. 3. Non-involvement of kidney capsule except through pressure, causing atrophy. 4. Escape of ureteral involvement except in a small minority of cases, and then only by means of pressure.

Histologically the tumor is characterized by the multiplicity of its component parts. Thus we find both sarcomatous and carcinomatous elements as well as unstriped muscle tissue, embryonic connective tissue and cartilage. The latter form of tissue, which Ziegler says is unusual was present in one of our cases. Although these different and widely diversified structures may all be present in the same growth yet there is never an intimate blending of any two or more of them but on the contrary there seems to be a rather sharp line of cleavage between each when present. In other words we do not see a gradual transition of tissue type but the presence of the various forms lying side by side.

The histologic features of our two cases resemble more distinctly a carcinomatous than a sarcomatous type of neoplasm, since in both there is a large share of inter-cellular reticulum. Again, the type of cell resembles more closely carcinoma than sarcoma and the arrangement of cell masses is more distinctive of this type of tumor. In case II, the extensive necrosis apparent from the gross appearance alone and accentuated by the microscopic picture is an example of how rapidly growth, followed by degeneration may occur as will be seen from the clinical record of the case as furnished by the history. A marked destruction of the deeper structure of the kidney may be and usually is present in marked degree, yet the capsule of the organ preserves its in-

tegrity for the most part even though the remainder of renal substance has undergone extensive degeneration and necrosis. In one of our cases necrosis was a marked feature of the greater part of the kidney, but the capsule seemed to be unaffected throughout its greater extent.

The escape of the ureter from invasion is both peculiar from the pathologic and important from the clinical point of view. Even after the tumor has reached an enormous size this organ does not apparently share in the destructive process either through infiltration of the cellular elements of the new growth or because of pressure. The absence of both of these features has of course a direct bearing upon the symptomatology of the condition since pain and discomfort are absent in practically all and haematuria is present in only about one-fourth of the cases. As to the former (pain and discomfort) neither were found in our two cases, and haematuria never manifested itself. In case 1 the history of diarrhoea alternating with constipation together with the presence of mucous in the stools may have been simply a concomitant feature. On the other hand it may have been caused by the pressure exerted upon the colon, for at operation the latter was found bound down by adhesions to the tumor.

Birch-Hirschfeld, in his paper on kidney tumors, states as his belief that the so-called embryonal renal adenocarcinoma arise from the remains of the Wolffian body. He credits Eberth as having been the first to announce this theory. Using this belief as an hypothesis, he draws the conclusion that in this way we can account for the fact that the tumor from its gross anatomic appearance is in such intimate relationship with the kidney, whereas histologically, there is seen a distinct line of cleavage between the neoplastic tissue on the one hand and true renal tissue on the other hand.

Wilms, whose communication appeared the year following Birch-Hirschfeld's monograph, agrees with the latter's deductions only in so far as they refer to the epithelial elements contained in the tumor. This author, however, claims that to account for the other tissue elements particularly striated muscle fibres, we must look elsewhere than to the Wolffian body as a point of origin, since the latter cannot be considered as the source from which the various other constituents of the tumor spring.

Grawitz disagrees with both Birch-Hirschfeld and Wilms as to the origin of these growths. He believes that the evolution of the tumor results from a fully developed kidney that has preserved a portion of its embryonic tissue. The latter gives rise to the mixed neoplasm. Grawitz in this way accounts for the presence of embryonic elements in the tumor. Imbert supports the view held by Grawitz.

Adami, drawing upon Wilms as to the histogenesis of this type of tumor, states that the primitive kidney or Wolffian body first gives rise to the myotome or primitive kidney segment, later giving off the nephrotome or matrix for future kidney tissue. The myotome also gives off the sclerotome from which latter part the mesenchymatous elements of this part of the body are developed, such as striated muscle and vertebrae. Adami, reasoning along these lines, concludes that any tumor composed of such tissues as kidney substance proper, striated muscle and connective tissue, could originate solely from groups of cells which of themselves are capable of having originated all these various forms.

If we do not accept this view as to the histogenesis, the same author says that we are forced to the conclusion that certain of the mesodermic cells, capable of creating sclerotome as well as nephrotome, are carried to the future kidney area in a latent state. During the course of their development, they give rise to an aberrant tumor of mixed origin. If this is the mode of formation an embryonic consistence of a single layer is the result. In other words, all cells take their origin from the mesoblast.

Brosin holds that development takes place from the lymph vessels and that the so-called epithelial elements are in reality endothelial in origin.

Ribbert contends that the epithelium of the renal pelvis is the source from which the epithelial elements of the tumor itself spring.

Occasionally the tumor has been found having its point of origin in the capsule of the kidney. Cases of this nature are reported by Hansemann and Ribbert.

In considering the points of differentiation between embryonal renal tumors of mixed origin and true carcinomata, the following are the points in which the former are to be distinguished. (1) Occurrence in early childhood. (2) Rapid growth. (3) Neighboring organs are affected slowly and then only because of

mechanical pressure. (4) Little tendency to form metastases. (5) In its extension it resembles hypermephroma because of the fact that the channel of metastasis is the blood and not the lymph. (6) The glandular portion of the tumor is sharply differentiated from the healthy renal tissue, although the latter may atrophy as a result of pressure.

The most important symptom to be noted is the presence of the tumor mass itself, which is quickly followed by rapid growth occasioning bulging and distension in the area affected. If the growth reaches sufficient size (and unless operative interference is early such is usually the case), pressure by contiguity produces the usual train of sequalae such as distension of the superficial abdominal veins, pain, distress, and constipation the latter group of symptoms not being distinctive of the condition *per se* but produced simply by mechanical interference. In general, stress has been laid upon the rapid growth of the tumor. In one of our cases this, however, was not a feature for in so far as we can rely upon the history as given us by the mother of the child, a small mass, barely perceptible, was noted during the first year of life, the tumor remaining stationary in size until three or four months prior to operation, the latter not being performed until the child had passed its fourth birthday. This, I think, must be noted as a rather unusual occurrence when we compare the case with others. General malaise, loss in appetite, decrease in weight, the symptoms complex of malignancy is in most cases a late manifestation when the tumor has broken through the capsule of the kidney. In this connection, it is to be noted that metastasis is the rule for the most part only when the latter condition has occurred, hence the absence of the usual train of constitutional symptoms that are so frequently found during the early stage of malignancy found elsewhere, and under different conditions.

The most important differentiation is to be made between this condition and hypernephroma once the fact has been established that we are dealing with a foreign growth attached to or springing from the kidney. In hypernephroma we deal with a tumor occurring commonly between the age of 30 and 40, characterized by slow growth and usually attended with haematuria. In the mixed tumor of embryonic origin we find the condition existing in childhood or infancy (usually below the fifth year), rapid

growth and no evidence of haematuria in most instances. Cases, however, of haematuria have been reported by Patureau, Baginsky, and Seibert. The absence of this last symptom is of great significance in the diagnosis, as it occurs in only about 25 per cent of cases at any stage of the disease. In neither of our own cases could we obtain any pre-operative history of red blood cells in the urine, nor while the patients were under observation in the hospitals did the urine show the presence of blood. As an additional differential point in diagnosis Israel, quoted by Pfaundler and Schlossman, mentions the fact that a true kidney tumor is palpable near the costal margin between the ninth and eleventh ribs whereas neoplasms, taking their origin from supra renal tissue are situated commonly at or near the middle line.

The absence of ureteral involvement in this class of renal tumors is worthy of especial mention as it seems to be a distinctive feature of this particular neoplasm alone. Quoting Bland Sutton "Though the ureter so constantly escapes invasion yet the veins are always implicated. And this constitutes one of the most peculiar as well as most dangerous features of renal sarcomata in children." This author mentions the fact that the tumor tissue may extend into and along the course of the inferior vena cava and that portions may be carried into the pulmonary circulation and even into the heart itself. A case is reported by Osler in which the right auriculo-ventricular orifice was blocked. Bland Sutton reports a case in which the entire length of the inferior vena cava was obstructed from origin to termination, the condition presenting clinically, an oedema of both legs.

Cases in which autopsy revealed general metastasis in lungs, liver, and skin have been reported by Marchand, Borchard, Wilms, Vogler, Manderli, Merkel, Perthes, and Engelken. Thrombosis of the renal vein was found by Engelken and Merkel.

The prognosis in these cases may be considered from the standpoint of surgical intervention, since medical or nonoperative treatment is of absolutely no avail. Nephrectomy alone offers the only chance of recovery. The results of operation in the main are not satisfactory. Albaran reports a series of 97 nephrectomies with a mortality of 30 per cent, a high figure. Of his 11 patients surviving the operation, all were free from recurrence for a year. Beyond this rather meager and unsatisfactory statement, he gives us no further clue as to the eventual recoveries

or deaths either from recurrence in the remaining kidney or from metastasis.

Steffen, quoted by Pfaundler and Schlossman, records 18 permanent recoveries out of a total of 88 operative cases. Bland Sutton, in 1893, in the first edition of his work on tumors, collected and tabulated twenty-one complete records of renal sarcomata in infancy upon which nephrectomy had been performed. Of the twenty-one cases twelve died as a result of operation. Of those recovering, the remainder died of recurrence within a year.

The same author states that nephrectomy in children under six years of age has a mortality of 50 per cent. Of the remaining 50 per cent, 45 die from recurrence at periods varying from two months to a year. In the remaining 5, life may be prolonged as may be shown by cases that are reported by various authors quoted by Bland Sutton.

The following two cases coming under personal observation that led to a study of this condition are from the private service of Dr. E. A. Vander Veer, to whom I am indebted for many courtesies in the preparation of this paper.

CASE I.—P. S., male, age twenty months, born in the United States. Family history—maternal grandfather died of an abdominal tumor, the nature of which is unknown. Mother alive but suffering from tuberculosis. Personal history is negative. Present illness is as follows: During December, 1908, a bulging in the right lateral anterior lumbar region was first noted. This increased rapidly in size, the child becoming weak and listless, with marked loss of weight. Constipation, which up to this time had not been present, now made its appearance and the patient began to exhibit this symptom which alternated with attacks of diarrhea, characterized by the passage of mucous-containing stools. The mother of the child states that bloody urine has never been passed, so far as she is aware.

Physical examination revealed a decidedly emaciated and anaemic child with a marked bulging tumor mass presenting in the right anterior lateral lumbar region extending from the free border of the ribs to the crest of the ilium. The mass is movable and exhibits dullness on percussion. There is no distension of the superficial abdominal veins. A diagnosis of a tumor of the right kidney (probably sarcoma) was made and because of the patient's already weakened condition operation was at once decided upon. The latter was performed a few hours after the patient's entrance in the hospital. Under ether anesthesia, an incision six inches long over the right border of the rectus muscle was made. The peritoneum was denuded, the tumor delivered and the pedicle as well as numerous firm

fibrous adhesions lying between the latter and the peritoneal coat of the mass clamped. Numerous adhesions connecting the growth to the intestines, particularly the colon, were treated in the same manner. These were cut and ligated with cumol catgut number three, after which the mass was removed from the abdominal cavity. Hemorrhage from the wound was marked but well controlled by means of catgut ligatures and packing inserted in the form of wide strips of vioform gauze, two of which were left in position. The wound was then closed by means of through and through sutures of silk worm gut.

During the operation, the radial pulse, which before anesthesia fluctuated between 170 and 180 and was of poor quality, disappeared entirely and the patient became markedly cyanotic with shallow respiration. Immediately following the return from the operating room 500 c.c. of saline infusion was given subcutaneously which was shortly followed by a return of the radial pulse with improved respiration. The head of the bed was elevated and hot water-bottles applied to the body. Also ten minimis of a 1-1000 solution of adrenalin chloride were given hyperdermically immediately following operation. Five minimis of the same solution were given for two doses during the following two hours. The patient's condition improved, and at the end of thirty-six hours the pulse had dropped to 148 and was of fair quality. Temperature at this time was 99.6. On the morning following operation the child's condition was slightly worse than during the night, the pulse having mounted to 158, the temperature being 99.8. On the afternoon of the 23d, two days following operation, the temperature rose to 100.6, the pulse having dropped to 140. From this time on, however, recovery was uneventful, both temperature and pulse falling and the general condition improving. Portions of the gauze drainage were removed at intervals of three, six and ten days following operation and the silkworm gut stitches were removed and the wound strapped at the end of two weeks. The patient was discharged as recovered on February 13, 1909, after a stay in the hospital of twenty-three days.

The pathologic notes of the case from the Bender Laboratory are as follows:

Clinical diagnosis. Malignant tumor of right kidney.

Organ or tissue. Right kidney with tumor mass.

Specimen consists of a mass of tissue representing the right kidney, measuring 11 by 8.5 by 6 cm. The entire mass is soft and oedematous and has lost most of its resemblance to kidney tissue. It is irregularly spheroidal in shape and somewhat nodular in appearance. The external surface varies in color from a greyish white to a pinkish grey and has attached to it numerous bands which are evidently due to dissection. Here and there are found thin translucent blood-stained tags of tissue evidently the remains of a capsule. On section the cut surface presents a

greyish white shiny lobulated appearance. Going deeper into the substance of the tissue there are found masses of a softened necrotic yellowish grey tissue with here and there areas of marked injection. It is impossible to differentiate the various parenchymatous renal structures.

Anatomical diagnosis. Sarcoma of kidney.

Microscopic description. Sections are through renal tumor showing the presence of irregularly arranged groups of epithelial-like cells with vesicular nuclei. In the central portion of these cell groups are found tubular-like structures that are lined with cells resembling renal cells and whose arrangement suggests the appearance of glomeruli. In other portions of the section the epithelial-like cells described above are densely packed so that very little stroma is apparent. The latter is composed of connective tissue which in portions of the section resembles embryonic connective tissue. Bands of striated muscle fibres are present; a few areas of cartilage are seen. One portion of the section shows the presence of a renal vessel whose lumen is almost completely obstructed by a mass of cells. The latter are large and polygonal in outline with prominent nuclei and cytoplasm that is decidedly granular. They are practically identical in appearance with the cells described above as occurring in the tumor mass itself. Sections from the renal cortex show no lesion, the tissue being normal throughout.

Microscopic diagnosis. Mixed renal tumor of embryonal origin.

CASE II. P. B., Female, age 4, born in United States. Family and personal history negative. Present illness—During the child's first year of life, the mother noticed a small growth that was barely perceptible on the left side of the abdomen. This was unaccompanied by any symptoms of discomfort or distress, either local or general. The mass remained stationary in size until three or four months prior to entrance in hospital, at which time growth became rapid. Synchronously with the rapid growth of the tumor, attended with bulging and distension of the left side of the abdomen, the child lost weight and strength although at no time has there been evidence of pain or distress. The urine has never contained blood.

Physical examination reveals a well developed but somewhat poorly nourished child. The entire left portion of the abdomen is filled with a tumor mass, approximately the size of a child's head, that occasions marked bulging and protrusion. The mass is partially movable and

elicits dullness on percussion. There is no distension of the superficial abdominal veins. The appearance of the tumor corresponds almost identically with conditions found in Case I. Examination of the urine was as follows: Cloudy amber, sp. gr. of 1030, alkaline in reaction, albumen present in well marked amount—no sugar—pus cells in abundance as well as epithelial cells. A diagnosis of mixed renal tumor of embryonal origin was made and nephrectomy decided upon.

Dr. E. A. Vander Veer operated under the same conditions as described in connection with the first case. The same operative procedure was carried out and the conditions found corresponded closely to those encountered in Case I. The tumor seemed, however, to be more freely movable and adhesions were neither so numerous nor so firm. Bleeding was slight in amount and the patient suffered but slightly from operative shock, nephrectomy being quickly performed, and the anesthetic being well borne. The patient made an uneventful recovery and was discharged after having remained in the hospital for a period of twenty days.

The pathologic report is as follows:

Clinical diagnosis. Malignant tumor of left kidney.

Organ or tissue. Left kidney with tumor mass.

Specimen consists of a tumor mass and the remains of a left kidney the size of a child's head. The entire mass of tissue is irregularly globular in shape and has a somewhat pulpy oedematous appearance. Its weight is 975 grammes. It measures approximately 40 cm. in diameter. The external surface of the tumor mass is roughened and shows the remains of a fatty capsule. At one pole of the mass there is a somewhat projecting bluish grey area measuring 8 by 7.5 cm. which evidently represents the remains of kidney tissue. The entire external surface of the tumor varies in color from a greyish white to a pinkish grey with here and there discolorations of a bluish tinge. Blood vessels are prominent. On section a thin blood-stained fluid exudes from the lower pole of the specimen, corresponding to the bluish grey area. The latter is composed largely of a necrotic deep reddish mass of tissue that is markedly hemorrhagic. The remainder of the cut surface is composed largely of a greyish white mass of softened oedematous necrotic tissue which seems to be composed of loosely connected bundles of coarse tissue. Throughout the section are found cystic formations of various sizes which on section exude thin serous exudates. Several of the latter have

apparently coalesced to form rather large polypoid areas. Many of the latter extend well into the renal capsule. The latter throughout most of its extent is intact and its appearance suggests a true capsular arrangement overlying and surrounding the tissue beneath.

Anatomical diagnosis. Mixed renal tumor of embryonic origin.

Sections are through tumor mass, large portions of which show necrosis. Other portions show epithelial inclusions composed of irregularly arranged tubular columns of large polygonal cells containing large nuclei staining deeply with methylene blue. Many cells have lost their nuclei. These latter show distinct protoplasmic granules. Many of the cells lie scattered throughout the reticulum, which is of the embryonic type of connective tissue. Other portions of the section show large masses of densely packed cells larger than those previously described and which contain somewhat elongated nuclei of the vesicular type. In these areas, the stroma is comparatively small in amount. The tumor is decidedly vascular, there being the remains of large blood vessels consisting of a single endothelial core, the lumina being filled with red blood cells and debris. Sections of renal cortex are negative. Muscle fibres and cartilage are absent.

Microscopic diagnosis. Mixed renal tumor of embryonic origin.

CONCLUSIONS.

(1) The so-called kidney sarcoma occurring in childhood is in reality a mixed neoplasm and the term sarcoma is a misnomer.

(2) Because of the diversity of histologic elements, such growths should be termed "Mixed tumors of embryonic origin."

(3) The tumor usually destroys the greater portion of the medulla of the kidney, but the cortex remains uninvolved or but slightly affected.

(4) Metastasis occurs relatively late, usually not until the capsule of the kidney has been ruptured.

- (5) The ureter is seldom involved, hence the usual absence of urinary symptoms.
- (6) Operation is indicated as early as possible.

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THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

BY ALBERT VANDER VEER, M. D.,
Albany, N. Y.

Previous to the Civil War the meetings of our National medical associations were always benefited by the presence of representative men from the South. After that period the men of that section, of all walks in life, were so thoroughly occupied in the restoration of their lost fortunes, and avenues of occupation, that medicine and surgery suffered equally with the rest. In the North, soon after the war, medical education made great advances, and, particularly when once the pathological micro-organisms of disease were understood and anti and aseptic surgery became established. About this time there came into existence a number of special societies, in which men from the South were active Fellows, but it was not until a quarter of a century had passed that there was organized a surgical association, the large majority of whose members were from the "Old South."

The writer is cognizant of the fact that not a few of the medical men who had borne the fatigue, responsibility, and sorrow of many a hard-fought campaign, were disposed to question the advisability of giving the new society so decidedly a

sectional name, but it was believed that by not limiting its membership to any particular portion of the United States it would enable the profession in the South to develop their younger men, and have every centre represented where advanced work was being done. This idea, in its evolution, has brought forth excellent results.

Nearly every state in the North has had strong, hard-working surgeons in its list of Fellows, who attend the annual meetings regularly, present forcible papers, and enter freely into the animated discussions — so often a marked feature of these gatherings. It is safe to say that no body of men has done so much to ease, relieve, and wipe out the bitterness of stern war as was that of 1861-65 as has this association.

The meetings, in the presentation of papers, as to value and quality; in discussions and exchange of thoughts, have been marvels from the standpoint of progress. The twenty-fourth annual session, held in Washington, D. C., December 12th, 13th, and 14th, was decidedly confirmatory of this fact. It is given to but few professional societies to be able to present such a number of rare, good papers, and such earnest, impressive discussions as this meeting afforded.

The surgical lesions of the prostate, bladder, ureters, and kidneys were handled in a masterly manner, the ablest men from our entire country participated, and the resultant good must be felt in our future work. Abdominal surgery received its full share of attention; uterine tumors and pelvic lesions, as well as misplacements — in their consideration — will be better understood by the present workers, and by those who follow in this field of surgery. A very valuable paper was presented and ably discussed, "Where Should the Line be Drawn Between Medicine and Surgery in Borderline Cases?" reminding one of our earlier work when the physician and surgery were urged to join their experience in the diagnosis and treatment of intestinal obstruction, peritonitis and other misunderstood abdominal conditions.

The parathyroids and their relation to the surgery of goitre were presented in an unusually interesting paper by one, who, in a few days, was to have the sympathy of the entire profession, in the operation he was to undergo, and the joyful gratitude of the entire country in his recovery. The surgical treatment of Graves' Disease, and the end results, was clearly demonstrated

by one "being in authority," and the whole subject was very ably discussed. The surgery of the biliary tract was offered in one of the clearest papers of any subject in the entire session.

By far the larger portion of time was given over to the presentation and discussion of surgical lesions relating to the stomach and intestinal tract.

When the Volume of Transactions is published it will be found that much valuable material has been added to the understanding of this yet debatable question in surgery. Whether the new points in the pathology and location of these organs, by the more perfect use of bismuth paste and radiography is to produce a more positive line of surgical procedure is a subject for further consideration.

Surely, a great responsibility is devolving upon operating surgeons regarding a conservative line of work in relieving visceroptosis by anastomosis, or the more radical operation of removing considerable portions of the large intestines. Much good might result in reviewing our earlier work in which operative intervention was carried too far. In the discussion that followed, as to short circuiting, considerable experience was related in regard to end-to-end or lateral anastomosis—the former sometimes producing dilatation and the latter showing a tendency to close, as has been observed in the operations for gastroenterostomy.

The attendance was excellent and authors were prompt in presenting their papers. Many surgical subjects were considered: Omentopexy; congenital gangrene of the forearm, with successful amputation, in an infant five days' old; the importance of diagnosis of pellagra in surgical cases was forcibly presented; the limitation of bone regeneration and joint reconstruction was most charmingly offered. A strong point insisted upon was not to drain joints. This latter paper will impart much valuable information to the members of our profession and merits careful study. Surgery of the large blood vessels received careful attention, especially in a paper presented by the President-elect. Rhinoplasty, and, particularly, hare lip, were earnestly discussed in two very valuable papers.

The President, in his presidential address, "The Cinematograph as an Aid in Medical Education and Research, Illustrated with Moving Pictures of Ultra-Microscopic Life and of Surgical

Operations," was far in advance in having offered the monumental essay of the meeting. It was a great contribution to future medical education and will certainly bear good fruit. The address, "The Fee-Splitting Evil," was ably presented and in a very strong manner — none too much so as was indicated by the interest given its reception by the Fellows of the Association.

There were a number of special subjects presented through the medium of valuable papers. "The Colon Bacillus in Odd Places" gave evidence of a great range of thought and was very judicially discussed.

Elephantiasis, presented with a view of getting a discussion from members residing in the extreme Southern cities, elicited an excellent train of remarks from the ever-alert and well-informed President.

"Caesarean Section in Eclampsia" received valuable, practical suggestions in a number of well-reported cases. In one of the discussions an extremely interesting reference was made to the establishing of a department in the Arts and Science in Johns Hopkins University — an effort to impress the student in and during his college work.

During the busy, earnest hours of work a valuable contribution was made regarding umbilical tumors. That many subjects in the department of surgery were in the minds of a large number of the Fellows was evidenced in the discussions, and the forthcoming volume will undoubtedly be of great assistance to the vigorous, progressive, young and middle-aged surgeon and specialist.

One of the best papers illustrating cool, calm, resourceful surgery, and demonstrating what is now possible in previously considered impossible cases, and the keen discussion that followed it was: "Emergency Operation for Cerebellar Tumor under Artificial Respiration." Anyone doing brain surgery must gain comfort and practical instruction from the careful reading of this remarkably well-prepared contribution. In his clear, intelligent presentation of the subject the veteran writer on "The Radical Cure of Hernia," came into his own, as the transactions of the association will plainly demonstrate. The discussion and unanimous vote given was his just due.

The subject of appendicitis was not overlooked, and is not likely ever to be, and here the writer would call the attention of

the thorough reader to the 25 volumes published by this great and hard-working association. In them, at one time or another, almost every surgical subject has been presented and discussed, and the best thoughts of the ablest workers in our profession in the South, East, West, and North of this great country are to be found. Like the intermarrying of strong families the offspring is shown to be greater, nobler, and better prepared for life's work than the parent preceptor.

There is yet something to be said in endorsement of, perhaps, the one great factor in the success of this association. In every administration it is to be observed, for "Men may come and men may go," president follow president, that papers are secured, programs are arranged, the neat, up-to-date Volume of Transactions published on time, and for this, by far, the greatest amount of credit is due to one, who, in his kindly, affectionate, firm, yet unusual executive manner, is known as our long-time secretary. May his official years in this association be many more.

Editorial

'Tis true, physicians must be in danger of losing their credit with the vulgar, if they should often tell a patient he has no need of physic, and prescribe only rules of diet or common use; most people would think they had lost their fee. But the first excellence of a physician's skill and care is discovered by resolving whether it be best in the case to administer any physic or none—to trust to nature or to art; and the next, to give such prescriptions, as, if they do no good, may be sure to do no harm.

SIR W. TEMPLE.



It is wise from time to time to compare methods **Physiological** of the present with those of the past to ascertain **Therapeutics** what progress has been made, and to determine the **of the Past.** different points of view of the practice of medicine as it changes with new discoveries. For these reasons the publication of a letter written by ESQUIROL nearly a hundred years ago, will be read and interest will be aroused, not

only from its historical value, but from the revelation of a personality. The acuteness of chemical perception challenges admiration. To alienists the name of ESQUIROL is familiar, as the immediate successor and pupil of PINEL, and so one of the fathers of modern mental medicine. He is probably not so well known to the general profession. He was born at Toulouse. January 4, 1772, and became known as a philanthropist from the work done in Paris in reforming the care of the insane. He was a voluminous writer and lecturer, and his "Des Maladies Mentales," in two volumes, is a classic. He died December 12, 1840.

The original, in French, of which the following translation is offered, is in the possession of Dr. JOHN B. CHAPIN, of Canandaigua, N. Y., to whom the ANNALS is indebted for the privilege of publication:

The health of Madame F. who does me the honor of consulting me offers nothing that can legitimately give the least inquietude either for her life or for her reason. Madame is subject to an affection of the nervous system, her susceptibility is exalted, sensibility too lively. Her very painful feelings disturb her, torment her, cause her to reflect too much upon herself and cause chimerical apprehension.

Her trip in Europe had been followed by very good health which her trip in Switzerland — the too great stimulation of the mountain air and perhaps the season of the year have impaired anew. We may hope that the sea voyage that she proposes in order to return to her own country and to her family will restore to her her good health, which she enjoyed a little while after her arrival in Europe. I have little advice to give, however, if after her return the excitability has not ceased I propose the use of the following means.

And moreover during the voyage Madame will find it well for her to wet her head with cold water, to take frequently hot foot baths with sea salt or soap, she will attend carefully to the movement of her bowels and if any constipation manifest itself she will have recourse to injection. She will avoid eating meats or salt fish and * * * will return to her own apartment, after having rested if the health is not perfectly reestablished. Madame

will submit to the following regimen: Rise very early, that is to say with the sun, exercise on foot or on horseback on rising from bed. Every two days a bath of a temperature agreeable to the patient of two or three hours duration—a bath prepared with two pounds of gelatine or eight ounces of water distilled from cherry laurel. On the intervening day Madame will take a chair bath of agreeable temperature prepared with a big handful of nightshade or with some heads of poppy. This bath should last two hours. Madame will take every day a pint or a pint and a half of chicken broth or veal broth, to which one will add during the boiling two or three portions of lettuce. Several days before the menstrual epoch we should substitute for the chair bath prepared with nightshade or the head of poppy a chair bath prepared with the infusion of camomile flowers. We should substitute for the veal broth and the chicken broth an infusion of orange flowers or of valerian or of "sange." Madame ought to subsist chiefly on herbaceous vegetables, on cooked fruits, on milk food. She should take only one sort of meat at one of her meals each day. She will avoid all that has been salted, spiced, will only drink water moderately diluted with wine at her meals, will abstain from pure wine and from liquors, from black coffee and will be moderate in hot aromatic drinks, such as tea or others. Madame ought to take the most active exercise possible in the course of the day; she ought to create for herself active and interesting occupations so that her mind constantly occupied will not reflect on itself. The aid of occupation continuous or interesting is imperatively demanded. Madame should forget herself in some way, should not have the time to torture herself about the trifling ailments she may have. It is important to attend carefully to the movement of the bowels to prevent constipation; if this have manifested itself it will not suffice to combat it with injections, but Madame should take at night before going to bed one or two or even three of the pills indicated below:

R

Extract of colocynth 3 ss.

Calomel 3 i.

Made into pills xxxvi silvered.

PARIS, 23 August, 1838.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JANUARY, 1912.

Deaths.

Consumption	18
Typhoid fever	2
Scarlet fever	0
Measles	0
Whooping-cough	1
Diphtheria and croup.....	5
Grippe	3
Diarrheal diseases	2
Pneumonia	16
Broncho-pneumonia	6
Bright's disease	24
Apoplexy	12
Cancer	11
Accidents and violence.....	6
Deaths over 70 years.....	47
Deaths under 1 year.....	18
Total deaths	197
Death rate	22.18
Death rate less non-residents.....	20.47

Deaths in Institutions.

	Non-Resident.	Resident.
Albany Hospital	11	7
Albany Orphan Asylum.....	0	0
Child's Hospital	0	1
Albany County Jail.....	0	0
County House	3	3
Homeopathic Hospital	3	3
Hospital for Incurables.....	0	0
Home for the Friendless.....	1	0
Little Sisters of the Poor.....	9	0
Public places	0	1
Penitentiary	0	0
St. Frances de Sales Orphan Asylum.....	0	0
St. Margaret's House.....	1	2
St. Peter's Hospital.....	9	1
St. Vincent's Female Orphan Asylum.....	0	1
Austin Maternity Hospital.....	1	0
Albany Hospital, Tuberculosis Pavilion.....	3	0
Confederation of Labor.....	0	0
Totals	41	19
Births	146	
Still births	8	

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

In the Bureau of Plumbing, Drainage and Ventilation there were one hundred seventy-four inspections made, of which fifty-one were of old houses and one hundred twenty-three of new houses. There were forty-five iron drains laid, five connections to street sewers, seven tile drains, fifty-two cesspools, sixty-two wash basins, seventy-one sinks, sixty bath tubs, fifty-four wash trays, five trap hoppers, seventy-three tank closets. There were sixty-seven permits issued, of which sixty-one were for plumbing and six for building purposes. Nineteen plans were submitted, of which seven were of old buildings and twelve of new buildings. Forty-nine houses were tested, one with blue or red, six with peppermint and there were forty-two water tests. Nineteen houses were examined on complaint and sixty-one were re-examined. Seventeen complaints were found to be valid and two without cause.

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	5
Scarlet fever	5
Diphtheria and croup.....	30
Chickenpox	9
Measles	6
Whooping-cough	3
Consumption	28
<hr/>	
Total	86

Contagious Disease in Relation to Public Schools.

	REPORTED.
	D. S. F.
Public School No. 2.....	I
Public School No. 6.....	I
Public School No. 9.....	I
Public School No. 11.....	I
Public School No. 12.....	I
Public School No. 15.....	I
Public School No. 16.....	.... I
Public School No. 20.....	8
Public School No. 22.....	I
Public School No. 24.....	.... I
St. Patrick's School.....	.... I
Cathedral School	I
<hr/>	

Number of days quarantine for diphtheria:

Longest..... 35 Shortest..... 5 Average..... 14 8/22

Number of days quarantine for scarlet fever:

Longest..... 38 Shortest..... 21 Average..... 27

Fumigations:

Houses.....	46	Rooms.....	208
Cases of diphtheria reported.....			30
Cases of diphtheria in which antitoxin was used.....			28
Cases of diphtheria in which antitoxin was not used.....			2
Deaths after use of antitoxin.....			3

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	24
Negative	15
Failed	0
	—

Total	39
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Living cases on record January 1, 1912.....	345
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Cases reported during January:

By card	20
Dead cases by certificate.....	6
	—

	26
	—

	371
--	-----

Dead cases previously reported.....	12
Dead cases not previously reported.....	6
Duplicates	1
Recovered	0
Removed	3
Unaccounted for	0
	—
	22

Living cases on record February 1, 1912.....	349
--	-----

Total tuberculosis death certificates filed during January.....	18
---	----

Out of town cases dying in Albany:

Albany Hospital	1
Albany Hospital Tuberculosis Pavilion.....	1
	—
	2

Net city tuberculosis deaths.....	16
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BUREAU OF PATHOLOGY.
Bender Laboratory Report on Diphtheria.

Initial positive	27
Initial negative	176
Release positive	25
Release negative	41
Failed	31
	—
Total	300

Test of sputum for tuberculosis:	
Initial positive	18
Initial negative	15
Total	33

BUREAU OF MARKETS AND MILK.

Market reinspections	128
Public market inspections.....	25
Fish market inspections.....	5
Pork packing-house inspections.....	2
Rendering establishment inspections.....	2
Slaughter house inspections.....	4
Hide house inspections.....	3
Milk wagons in clean condition.....	28
Butter fats below 3%.....	0
Butter fats from 3% to 3.5%.....	4
Butter fats from 3.5% to 4%.....	23
Butter fats over 4%.....	1
Solids under 12%.....	7
Solids from 12%to 12.5%.....	13
Solids from 12.5% to 13%.....	6
Solids over 13%.....	2

MISCELLANEOUS.

Mercantile certificates issued to children.....	19
Factory certificates issued to children.....	14
Children's birth records on file.....	33
Number of written complaints of nuisances.....	29
Privy vaults	9
Closets	2
Plumbing	6
Other miscellaneous complaints.....	12
Cases assigned to health physicians.....	95
Calls made	250

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

A regular meeting of the Medical Society of the County of Albany was held at the Albany Medical College Tuesday, November 14, 1911.

Regular members present were: Drs. Babcock, Bedell, A. J., Bellin, Blair, Carroll, T. L., Craig, Cronin, Doescher, Donhauser, Drake, Draper, Druce, Fromm, Grant, Gutmann, George, W. H., Hacker, C. G., Hacker, C. W. L., Harrig, Haswell, Jenkins, Joslin, Keens, Lanahan, Le Brun, Lewi, Lempe, Lomax, Lyons, Moore, C. H., Munson, Myers, J., Neuman,

Papen, G. W., Sr., Papen, G. W., Jr., Reynolds, Rooney, Ryan, Rulison, Harry, Skillicorn, Stevenson, Sheldon, Traver, Vander Veer, Albert, Vander Veer, J. N., Vander Veer, E. A., Ward, Wiltse.

Meeting called to order by President Bedell.

Moved and seconded that minutes of the previous meeting be approved without reading. Passed.

A communication from the secretary of the State Society was read suggesting that an amendment should be made to Chapter VII of the By-Laws, so that section 2 should read: "Members whose dues or assessments for the current year are unpaid on May first, or who are under suspension, shall not be eligible for nomination, election or appointment to any official position in the Society, nor shall they be entitled to vote or receive the notices, publications or privileges of the Society until their dues are paid."

Moved and seconded that this communication be placed on file. Passed.

Announcement was made that on request of the Society the State Library had established a reading room for the current medical literature on the top floor of the building occupied by the State Board of Charities, at the corner of Washington Avenue and Swan Street. For the present this reading room will be open on Monday, Wednesday and Friday from 3 to 5 o'clock in the afternoon.

It was also stated that since the State Library appropriation bill became a law the Library was in a position to assume the financial responsibility of this room, and that therefore the Society would be relieved of this burden.

Dr. WILTSIE said that some of the older men would probably remember a nurse by the name of Elizabeth Hogan, who for many years nursed about the city and for a time worked for the Guild. In 1898 she went to the Spanish-American war as a nurse and shortly after her return developed a pulmonary tuberculosis and was sent to Ray Brook with the assistance of this Society. Her disease has now progressed till she is a hopeless invalid and entirely helpless and unable to work, and unfortunately is dependent.

Congressman Malby has become interested in the case and has introduced a bill in Congress for a special pension for her services during the recent war.

Dr. WILTSIE thinks, that if it is the sense of the Society, that a communication from the Society to Congressman Malby would be helpful to her cause.

Dr. CRAIG said that this was a small matter, but very often the small matters counted, and that he was decidedly in favor of such a move.

It was then moved by Dr. WILTSIE and seconded that—

The Society recommend to Congress the passage of a special pension bill that would permit Miss Hogan to receive a pension for her services during the Spanish-American War.

Dr. CRAIG offered an amendment to the effect that the recommendation be sent to the representative from this district. Amendment accepted by Dr. WILTSE.

Motion with amendment passed.

The scientific program was then presented, consisting of a Symposium on the Heart. The program was as follows:

"Anatomy," Dr. N. K. Fromm; "Pathology," Dr. H. S. Bernstein; "Symptoms and Diagnosis," Dr. J. F. Rooney; "Treatment," Dr. S. B. Ward; "Surgery," Dr. C. G. Hacker.

Dr. NEUMAN said that the president and the Society were to be congratulated for the medical food that had been presented. The subject was very broad and so many facts had been recently elucidated that it would take several evenings to consider what had been learned in the last few years.

Meeting adjourned upon motion.

EDWIN L. DRAPER, *Secretary.*

A regular meeting of the Medical Society of the County of Albany will be held at the Albany Medical College, Tuesday evening, November 14, 1911, at 8:15.

Scientific program—Symposium on the Heart:

"Anatomy," Dr. N. K. Fromm; "Pathology," Dr. H. S. Bernstein; "Symptoms and Diagnosis," Dr. J. F. Rooney; "Treatment," Dr. S. B. Ward; "Surgery," Dr. C. G. Hacker.

This is the first of a series of symposiums, and all the members are urged to be present. The meeting will begin promptly, and at the close refreshments will be served.

EDWIN L. DRAPER, *Secretary.*

ARTHUR J. BEDELL, *President.*

A regular meeting of the Medical Society of the County of Albany was held at the Albany Medical College on the evening of December 12, 1911.

Members present: Drs. Babcock, Bedell, A. J., Bingham, Blair, Classen, Conway, Cook, Corning, Craig, Curtin, Donhauser, Douglas, Drake, Draper, Gutmann, Hacker, C. G., Hacker, C. W. L., Hawn, Herrick, Holding, Jenkins, Joslin, Kellert, Lawyer, Le Brun, Lomax, Lyon, McHarg, Moore, C. H., Myers, C. L., Myers, Jerome, Page, Papen, C. W., Jr., Pitts, Reynolds, Ryan, Sheldon, Skillicorn, Traver, Ward, Vander Veer, J. N.

Meeting was called to order by President Bedell.

Moved and seconded that minutes of previous meeting be approved without reading. Passed.

A letter from Dr. ANDREW MACFARLANE calling the attention of the Society to an article which had appeared in a local newspaper describing a "rare and difficult operation" and which was illustrated by a picture of the operator. It was moved and seconded that this letter, with the clipping of the article enclosed, be referred to the Board of Censors for action. Passed.

The scientific program consisted of a Symposium on the Lungs, and was as follows:

"Anatomy," Dr. W. A. Reynolds; "Pathology," Dr. Ellis Kellert; "Symptoms and Diagnosis," Dr. C. B. Hawn; "X-Ray as an Aid to Diagnosis," Dr. Arthur Holding; "Treatment," Dr. Erastus Corning; "Surgery," Dr. J. H. Gutmann.

The various papers were then discussed by Drs. Jenkins and Ward.
Meeting adjourned upon motion.

EDWIN L. DRAPER, *Secretary.*

A regular meeting of the Medical Society of the County of Albany was held on the evening of January 9, 1912, at the Albany Medical College.

Members present: Drs. Babcock, Bedell, A. J., Bellin, Classen, Conway, Craig, Curtis, Dawes, DeVoe, Doescher, Draper, Finch, Fromm, Gutmann, Hacker, C. G., Hacker, C. W. L., Jenkins, Lipes, Lomax, McNutt, Jerome, Myers, Moore, C. H., Morrow, Munson, MacFarlane, Merrill, Papen, G. W., Sr., Papen, G. W., Jr., Pitts, Rooney, Rulison, Traver Vander Veer, E. A., Vander Veer, J. N.

Meeting was called to order by President Bedell.

Moved and seconded that minutes of previous meeting be adopted without reading. Passed.

The scientific program, A Symposium on the Liver, was as follows:

"Anatomy," Dr. H. E. Lomax; "Pathology," Dr. W. D. Allen; "Diagnosis and Symptoms," Dr. Jerome Myers; "Treatment," Dr. S. L. Dawes; "Surgery," Dr. E. A. Vander Veer.

The papers were discussed by Drs. Gutmann, Rooney, Craig, C. W. L. Hacker, and Jerome Myers.

At the close of the scientific program the Board of Censors presented the following report, which was accepted:

"Your Board of Censors, after a thorough consideration of all the facts from the possible sources of information, would report as follows:

"1st. That it does not know the manner of occurrence of the publication of the article describing an operation for the relief of a rare and unusual surgical condition as contained in your reference of December 12, 1911, and

"2nd. The Board of Censors is of the opinion that Dr. George Lempe had nothing to do with the writing or publication of said article."

Meeting adjourned upon motion.

EDWIN L. DRAPER, *Secretary.*

A regular meeting of the Medical Society of the County of Albany was held on the evening of February 13, 1912, at the Albany Medical College.

Members present: Drs. Bedell, A. J., Bellin, Classen, Craig, Curtis, Cronin, Doescher, Draper, Druce, Finch, Fromm, George, Haswell, Herrick, Hacker, C. G., Hacker, C. W. L., Jenkins, Lomax, Lyon, Lanahan, MacFarlane, Myers, Jerome, Morrow, Munson, Pitts, Reynolds, Rulison, Sheldon, Skillicorn, Ryan, Traver.

Meeting was called to order by President Bedell.

It was moved and seconded that the minutes of the previous meeting be approved without reading. Passed.

Moved by Dr. RULISON, and seconded, that according to the annual custom the sum of \$15 be voted to the American Association of Certified Milk Commissions. Passed.

James Edward Maloney, M. D., was announced as a candidate for membership. President BEDELL appointed Drs. C. G. HACKER and RULISON as tellers.

It was announced that the ballots were unanimously in favor of the candidate and he was declared elected.

A communication from Dr. SHAW was read calling the attention of the Society to an advertising specialist in the city of Albany. It was moved and seconded that this communication, together with the samples of advertising circulars which were enclosed, be referred to the Board of Censors. Passed.

The scientific program consisted of a Symposium on the Intestines, and was as follows:

"Anatomy," Dr. J. D. Craig; "Pathology," Dr. W. D. Allen; "Symptoms and Diagnosis," Dr. T. F. Doescher; "Treatment," Dr. Andrew MacFarlane; "Surgery," Dr. Traver.

Dr. W. D. AYER, who was to have talked on the Pathology, was unavoidably prevented from being present and Dr. ALLEN very kindly consented to demonstrate the specimens.

The papers were discussed by Drs. Fromm, Jerome Myers, C. G. Hacker, Herrick, C. W. L. Hacker and Rulison.

Meeting adjourned upon motion, after which a light lunch was served.

EDWIN L. DRAPER, *Secretary.*

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR JANUARY, 1912.—Number of new cases, 159: classified as follows: Dispensary patients receiving home care, 2; district cases reported by health physicians, 6; charity cases reported by other physicians, 55; moderate income patients, 81; metropolitan patients, 15; old cases still under treatment, 100; total number of cases under nursing care during month, 259. Classification of diseases for the new cases: Medical, 40; surgical, 10; gynecological, 1; obstetrical under professional care, mothers 53, infants 52; infectious diseases in the medical list, 3. Disposition: Removed to hospitals, 4; deaths, 12; discharged cured, 100; improved, 18; unimproved, 12; number of patients still remaining under care, 113.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 7; nurses in attendance, 7; patients carried over from last month, 1; new patients during month, 9; patients discharged, 4; visits by head obstetrician, 0; visits by attending obstetrician, 10; visits by students, 47; visits by nurses, 57; total number of visits for this department, 115.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,216; for professional supervision of convalescents, 461; total number of visits, 1,677; cases reported to the Guild by three health physicians and forty-seven other physicians; graduate nurses 9, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 87; new patients, 121; old patients, 238; total number of patients treated during month, 359. Classification of clinics held: Surgical, 10; nose and throat, 7; eye and ear, 16; skin and genito-urinary, 7; medical, 9; lung, 13; dental, 0; nervous, 2; stomach, 3; children, 12; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held at the County Court House on Tuesday, February 13, 1912, at 8.30 p. m.

Scientific program: "The Essentials of the Radical Cure of Hernia with Report of Permanent Results in 200 Local Anesthesia Operations," Dr. Martin B. Tinker, of Ithaca. "Frequency of Surgical Disorders of the Kidneys and Ureters as Found at Autopsy and Hospital Practice," Dr. E. MacD. Stanton.

MEDICAL SOCIETY OF THE COUNTY OF RENSSELAER.—A regular meeting of the Medical Society of the County of Rensselaer was held at the County Court House on Tuesday, February 13, 1912, at 8.30 p. m.

Papers: "Arthritic Deformities," with lantern slide demonstration, Dr. John M. Berry, of Troy. "Progress in Syphilology," Dr. Henry S. Bernstein, of Albany. "Symposium on Arterio-Sclerosis." "Pathology and Etiology," Dr. Thomas G. Dickson. "Symptoms and Diagnosis," Dr. E. R. Stillman. "Prophylaxis and Treatment," Dr. R. H. Irish.

INTERSTATE MEDICAL JOURNAL.—The Interstate Medical Journal will have a symposium on "Diseases of the Digestive Tract" in the issue of March, 1912.

AMERICAN HOSPITAL ASSOCIATION.—The next meeting of the American Hospital Association will be held at Detroit, Mich., from September 24 to 28, 1912. The American Hospital Association is composed of hospital trustees, managers, contributors and officers of associations found to promote the interest of organized medical societies. It aims to promote economy and efficiency in hospital management, to educate the public regarding hospital needs, to disseminate information regarding every phase of hospital work, to assist those who are carrying hospital burdens, and

in every possible way to improve the care of the sick. Every worker in every hospital is invited to add their mite to the spread of hospital knowledge by contributing to this non-commercial exhibit.

Practical things, useful appliances or devices which lighten labor, add to safety, or comfort, or promote economy or efficiency in any way, in any department of any hospital. Improved ways of arranging dressings and materials which can conveniently be demonstrated should be shown in this annual exhibit. Methods of bookkeeping, keeping records, filing arrangements, helps to teaching, are among the special features which it is desired to include.

See that the article is accompanied by a descriptive note and state if possible the advantages and the uses of it.

The exhibit is designed to be inspirational and educational. Uncommon features of a historical character will be welcomed to the exhibit.

The officers of the Association are desirous of having every class of hospital in the Association represented in the exhibit-general, children's orthopedic, tuberculosis, eye and ear, infants, etc.

Kindly furnish the general chairman of the exhibits department with a list of exhibits from your hospital before the convention closes, if possible. This request is made in order that proper credit may be given for all contributions, in the principal volume of the convention proceedings.

CONGRESS WILL DISCUSS HEALTH AND SANITATION.—Washington will become the Mecca for sanitarians from all parts of the world when the 15th International Congress on Hygiene and Demography meets here in September. Already assurances have been received by Dr. John S. Fulton, Secretary-General of the Congress, that representatives from twenty-four foreign countries and from practically every state and territory in the United States will be present.

Among the states which have not signified their official intention of being present are New York, Massachusetts, Pennsylvania and Ohio. Although invitations were sent to the Governors of these and all other states eleven months ago by the Department of State at the request of President Taft, none of them have as yet taken any official action in the matter.

For the first time in its history of fifty years, the Congress will be held on American soil. Arrangements for the preliminary work have been made under the direct authorization of President Taft, who is Honorary President of the Congress, and with the active co-operation of the State Department. Huntington Wilson, First Assistant Secretary of State, is chairman of the Committee of Organization. Dr. Henry P. Walcot is President of the Congress.

In connection with the Congress, and in buildings especially erected for it in Potomac Park, the greatest exhibition on Public Health ever shown in America will be held. The exhibit, which will be composed of eleven groups, will seek to show what America has done in the prevention of disease and the promotion of health. Dr. Joseph W. Schereschewsky, of the United States Public Health and Marine Hospital Service, will be in charge of the exhibition.

During the Congress every effort will be made by the American Committee to show the foreign delegates how the United States has made possible the construction of the Panama Canal by establishing sanitary working conditions, and to assure them that after the canal is opened there will be no danger from the spread of disease from that quarter. A plan for securing uniform and comparable international vital statistics in which the United States is greatly lacking will also be presented. A concerted movement for better public health organization will be started. These and many other subjects will be discussed by the greatest experts in sanitation and public health in the world.

While the dates of the Congress itself are from September 23d to 28th, the exhibition will open early in September and will continue until after the Congress.

NATIONAL TUBERCULOSIS DAY.—Sermons on the prevention of consumption will be preached in thousands of churches on April 28th, which the National Association for the Study and Prevention of Tuberculosis, according to an announcement made February 15th, has set aside as Tuberculosis Day.

Last year out of 200,000 churches in the United States, over 50,000 observed Tuberculosis Day and millions of churchgoers were told about this disease from the pulpit. This year will be the third observation of Tuberculosis Day. Plans are being made to have the Gospel of Health preached more widely than before.

The movement will be pushed through the 600 anti-tuberculosis associations allied with the National Association and through the board of health, women's clubs, and other organizations in hundreds of cities and towns throughout the country. Through these various bodies the churches will be reached and interested in the tuberculosis campaign.

According to reports gathered by the National Association in 1911, practically 10 per cent. of all deaths in church congregations are caused by tuberculosis. In a study of 312,000 communicants of 725 churches in which there were 7,000 deaths in 1910, the death rate among these church members was found to be 2.24 for every thousand communicants. This is higher than the rate for the Registration Area of the United States, which was 1.60 in 1910.

"While these statistics," says the National Association "are not comparable from the point of view of accuracy with those of the Bureau of the Census, sufficient credence may be given to them to indicate that one of the most serious problems the ordinary church has to consider is that of the devastation of its membership by delegates. Every minister in the United States should give the subject some attention during the week preceding or that following April 30th."

VON NOORDON.—Dr. Carl Von Noordon, of Vienna, will deliver a series of lectures on "Problems of Metabolism" in October, 1912, at the New York Post-Graduate School and Hospital.

BUREAU OF PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.—A board of commissioned medical officers will be convened to meet at the Bureau of Public Health and Marine-Hospital Service, 3 B Street, S. E. Washington, D. C., Monday, April 8, 1912, at 10 A. M., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine Hospital Service.

Candidates must be between 22 and 30 years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examinations: 1, Physical; 2, oral; 3, written, 4, clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

The examinations are chiefly in writing, and begin with a short biography of the candidate. The remainder of the written exercise consists in examination of the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital and when practicable, candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority and after due examination, as vacancies occur in that grade.

Assistant surgeons receive \$1,600, passed assistant surgeons \$2,000, and surgeons \$2,500 a year. When quarters are not provided, commutation at the rate of \$30, \$40 and \$50 a month, according to grade, is allowed.

All grades above that of assistant surgeon receive longevity pay, 10% in addition to the regular salary for every five years' service up to 40% after twenty years' service.

For further information or for invitation to appear before the board of examiners, address "Surgeon-General, Public Health and Marine Hospital Service, Washington, D. C."

ANTI-TOXIN STATISTICS.—Assemblyman Ahearn has introduced a bill designed to produce statistics showing whether anti-toxin and vaccine inoculations are all that they should be. His bill provides that if any person die within six months after the injection or the use of any serum, anti-toxin or vaccine, the fact of such injection, the date, and a statement of the probable or improbable relation to the death of such person must be stated in the death certificate. Every local board of health shall com-

pile an annual report from such death certificates of the total number of persons dying within six months after inoculation and the nature of the disease from which such person died. A copy of such statement shall be filed with the State Department of Health. An attending physician who wilfully conceals or misrepresents the probable or possible cause of death by omitting from death certificate the statements required by this section shall be guilty of a felony, punishable by imprisonment for more than two years or by a fine of not more than \$1,000 or both.

PERSONALS.—Dr. EDWARD S. WILLARD (A. M. C. '80), has been reappointed health officer of Watertown, N. Y.

—Dr. THOMAS CARNEY (A. M. C. '02), has resigned as city physician of Schenectady, stating that the pressure of his private business is too great for him to continue in that capacity.

—Dr. HENRY J. NOERLING (A. M. C. '11), is engaged in active practice at Valatie, N. Y.

—Dr. SCOTT B. SCHLEIERMACHER (A. M. C. '11), is practicing at Wurtzboro.

ENGAGEMENT.—Dr. HENRY J. NOERLING (A. M. C. '11), of Valatie, N. Y., to Miss Sadie Helena Sliter, also of Valatie.

MARRIED.—Dr. C. FREDERICK MYERS (A. M. C. '10), of Albany, N. Y., and Miss Louise Helen Gensler, also of Albany, N. Y., were married February 7, 1912.

DIED.—Dr. RENSSLAER OTTMAN (A. M. C. '44), acting assistant surgeon and surgeon of the 35th Pennsylvania Militia, died at the home of his daughter at Carbondale, Pa., aged 91.

—Dr. J. H. STEVENS (A. M. C. '57), formerly of Stamford, N. Y., died at Rogers Rock, Ark., February 9, 1912.

—Dr. CHARLES H. TERRY (A. M. C. '64), a member of the Medical Society of the State of New York, assistant surgeon of the Ninth New York Volunteer Cavalry during the Civil War, surgeon to St. Mary's Hospital, Brooklyn, N. Y., since its foundation, and a police surgeon for thirty years, died at his home in Brooklyn, January 18, aged 67.

—Dr. JOHN GILBERT DICKSON (A. M. C. '79), died at his home in Bovina Center, N. Y., January 10th, from cerebral hemorrhage.

—Dr. GEORGE D. WHEDON (A. M. C. '53), died at Syracuse, N. Y., February 14, 1912.

In Memoriam

RENSSELAER OTTMAN, M. D.

Dr. Rensselaer Ottman, one of the oldest graduates of the Albany Medical College, died at his home in Carbondale, Pa., January 29, 1912. From the *Carbondale Leader* is taken the following high appreciation of his character and life:

"The death of Dr. Ottman, who was the Nestor of the medical profession in this section, marks the culmination of a long career that was

replete with great usefulness and good works. His professional career was one that commanded the respect and admiration of all men, and being a lover of mankind and one who sympathized with the endeavors to help his fellowmen, he won the enduring love of the pioneer families and succeeding generations. Although Dr. Ottman discontinued practice after rendering valuable service to his country during the conflict between the North and the South, he was always ready and willing in later years to render any service of a benevolent character whether for a friend or the city of his adoption, and in every movement instituted for the civic welfare he always proved an ardent supporter. So implicit and vigorous was the faith of the pioneers in the talents of Dr. Ottman that none other would be consulted when sickness entered the home. Of the many interesting incidents related with reference to the doctor's professional career is that of the valiant battle which he waged in this city during a fearful epidemic of the black or spotted fever, which claimed hundreds of victims. He was the leading physician here at the time and he went about day and night ministering to the afflicted, and during the battle against the dreaded malady his daughter fell a victim and died. The longevity of Dr. Ottman is accounted for from a glimpse at the genealogical record of the family where it is found that members of preceding generations lived to a ripe old age. His death was caused by infirmities, and he had been confined to bed about two weeks. His departure from this life, while not unexpected, caused profound sorrow in the family circle and the end came quietly and tranquilly in the presence of devoted members of the family who had nursed him tenderly during the remaining hours of his earthly existence. He was known never to have had an enemy, and his home life was always happy and Christianlike. Up to the time he was summoned by the death messenger, he retained remarkable control of all of his faculties. For the past several years the aged physician made his home with his daughter, Mrs. C. O. Mellen on Lincoln avenue.

"Rensselaer Ottman was born on the 9th day of March, 1821, in the town of Seward, Schoharie County, New York State. After receiving a liberal common school and academic education he commenced the study of medicine, which he pursued for four years. He attended medical lectures and graduated as Doctor of Medicine at the Albany Medical College in the year 1844. The doctor commenced the practice of his profession in Chenango County, N. Y., where he remained for three years, and removed to the village of Archbald, Pa., in 1847, where he remained in successful practice for seven years. He took up his residence in Carbondale in 1854, where he pursued his practice until the late war of the rebellion, when he entered the government service as acting assistant surgeon and surgeon of the 35th Pennsylvania Militia. He was in the service fifteen months. At the close of the war he returned to this city and entered into a mercantile business, and ten or twelve years later he retired from business altogether.

"Dr. Ottman was a descendant from old Revolutionary stock, and that he lived to be a nonogenarian is not to be wondered at when it is learned that several of his ancestors died near the century mark, and his great-

grandfather having lived to the remarkable age of 106. The latter fought through the Revolutionary War as a private soldier, and during the time of his absence in the army three of his sons were captured in a raid through Schoharie County by a tribe of Indians under the celebrated Indian Chief Brandt and carried into Canada, where the father found them after the close of the war. He lived to the age of 106, as indicated by the tombstone in the cemetery. One of the three carried away by the Indians was named Peter Ottman and grandfather of the doctor, who lived to the great age of 99 years. Nicholas, his son, and father of the doctor, died in 1893 at the age of 94 years. Dr. Ottman became a member of the Presbyterian church in 1851 and during most of the time since had acted as ruling elder. He was president of the Carbondale Medical Society for two years, and in politics he was a staunch advocate of the principles of the Republican party from Fremont to Taft. He gave his first presidential vote as a Whig and for Clay and Frelinghuysen."

JOHN H. STEVENS, M. D.

From the Toledo, Iowa, *Chronicle* the following memorial of Dr. Stevens is taken:

Dr. J. H. Stevens was born at Stamford, Delaware County, New York, October 1, 1835, and died at Rogers, Arkansas, February 9, 1912, aged 76 years, 4 months and 3 days.

He graduated from the Albany, N. Y., Medical College in 1857, at the age of 22 years. In 1859 he located at Butlerville, Tama County, Iowa, and engaged in the practice of medicine.

In 1862 he was commissioned assistant surgeon of the 14th Regiment, Iowa Volunteer Infantry, of which regiment one company or more were Tama County boys. He remained in the service until the regiment was mustered out of service.

After the war he went to Polo, Ill., and remained there about two years, when he came back to Iowa, and located at Montour, where he practiced medicine and engaged in other business, until about 1901, when on account of failing health he went south and settled at Rogers, Ark.

Dr. Stevens married Addie M. Parsons, of Byron, Ill., in 1864. She died in Montour, Ia., January 27, 1898. There were born to them six children, four of whom are living.

Dr. Stevens was converted when a young man and united with the M. E. Church of Stamford, N. Y. In his nearly forty years' residence in Montour he was known as a just and upright man, good to the poor and needy, and those in distress, and is kindly and lovingly remembered by those who knew him best.

ELMER LEWIS FLETCHER, M. D.

Elmer Lewis Fletcher was born November 7, 1862, at Pluffton, Iowa. He was a student at Union College and graduated from its medical department in 1886. He practiced for a short time in Glens Falls, N. Y., and later settled in Augusta, Wis.

In 1892 he married Marie Pfeifer, assistant principal of the High School of that place, and to them were born five sons, four of whom survive. In 1900 he removed with his family to Eau Claire, Wis., and limited himself to eye, ear, nose and throat practice. This was eminently successful, but his health failed and the family came to Eugene, Ore., partly for health reasons, largely that the boys might be able to remain at home while pursuing their studies at the State University. He engaged in the practice of his specialty here also for a time, but failing health caused him to give it up in the spring of 1911. He was ill much of the summer, but until a week before his death he seemed to be gaining. The end came suddenly and peacefully on Friday morning, November 10, 1911, as he sat reading.

Dr. Fletcher was a man of brilliant mind, large heart and generous impulses. Those who knew him best loved him most, for he was worthy.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Nervous and Mental Diseases.. By ARCHIBALD CHURCH, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and FREDERICK PETERSON, M. D., Professor of Psychiatry, Columbia University. Seventh edition, revised. Octavo volume of 932 pages, with 338 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.00 net; half morocco, \$6.50 net.

The seventh edition of this book will be welcomed by the multitude of readers who have appreciated its value in neurological and mental practice during the last thirteen years. The authors have succeeded in condensing for practical use the intricate and complicated problems of this department of medicine, and there is no more available book of reference. The present edition has been thoroughly revised, and this is shown not only by the addition of new material but by the recasting of much of the text in conformity with changes of viewpoint and more definite knowledge.

In the section on nervous diseases special care has been given to the revision of chapters on meningitis, aphasia, poliomyelitis, pellagra and pituitary diseases. The knowledge of infantile paralysis has been greatly extended during the last few years, and it is not at all unlikely that the change in the conception of this disease will result not only in a definite pathology and etiology, but also in a more successful method of treatment. Furthermore, it is not at all unlikely that some other conditions of the central nervous system hitherto regarded as individual diseases, as, for instance, inflammations of the cerebral gray matter, may be included with poliomyelitis of the cord in a general infectious or epidemic disease.

The possibility of this is indicated, and the researches of Flexner and others are described by Dr. Church, but he has not deemed it advisable to recast the classification. Chorea minor, on the other hand, is included among the infection neuroses, and very properly. It is still necessary to include various mental factors, as fright and worry, in the etiology of chorea, but there is a tendency now to discover an infectious origin in every case, although the author believes that the presence of infectious diseases prior to the outbreak of chorea is merely a coincidence.

In the chapter on neurasthenia, the classical error of attributing the word "neurasthenia" to Beard is repeated. It is not yet generally known that Dr. Van Deusen of the Kalamazoo Asylum formulated this phrase in one of the reports of that institution before Beard announced his theory.

In the discussion of mental diseases Dr. Peterson states frankly the great difficulties attending the presentation of this subject and the different conceptions entertained by different authorities. After devoting several large pages to tables containing complicated phrases which seem so contradictory and confusing to the average reader, he is justified in complaining that there is little practical or definite in these attempts at the classifications of insanity. He enters a guarded protest against the almost universal adoption in the United States of the theories of Kræpelin, and points to the difficulty in determining by individual observation the accuracy of Kræpelin's observations because of the need of observing patients through a life time. It is rather difficult to accept Kræpelin's theory of manic-depressive insanity, in which wholesale annihilation of mania and melancholia is effected. It is perhaps well to state that there are American clinicians of greater age than Kræpelin, and fully as large clinical experience, who maintain that they have observed cases of mania in whom there has been no recidivation, and it would be a gloomy outlook, indeed, for acute mental cases if all attacks of melancholia and mania were to be regarded in the unfavorable light of a recurrent psychosis. Dr. Peterson questions whether it is altogether profitable to exchange the classical expression "melancholia" for the cumbersome phrase "the depressed type of manic-depressive insanity," and whether the word "mania" should be abandoned for "the manic type of manic-depressive insanity." Dr. Peterson's scepticism is revealed by what must be regarded as a fine ironical touch; for he uses the same text and the same illustrations under these cumbersome terms as appeared in the earlier editions under mania and melancholia. Thus unconsciously or not Dr. Peterson has brought more forcibly into notice than any American writer the regrettable fact that the alleged progress in mental disease during the last decade consists merely of an exchange of terms and the use of new words, not to indicate the existence of new diseases or discoveries in pathology or etiology or treatment, but merely as suggesting a different angle of vision, leaving the question still open, as to whether this stands for an actual advance or not.

Apart from these academic questions, those chapters of the book in which the treatment and the etiology and the general symptomatology of mental diseases are discussed will be highly appreciated by the reader who wishes to approach the essential facts at once. It is worthy of note that Dr. Peterson has brought to the performance of his difficult task the experience of his younger days in state hospitals for the insane, as well as his later experience as Chairman of the New York State Commission in Lunacy. From this has been derived his appreciation of the work done in these institutions and of the high character of the men who direct them. This is of value in overcoming an unreasonable prejudice against hospitals for the insane, which exists, not only in the mind of the community at large, but unfortunately also to too great an extent among general practitioners of medicine.

Electricity, Its Medical and Surgical Applications, including Radiotherapy and Phototherapy. By CHARLES S. POTTS, M. D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia, with a Section on Electrophysics by H. C. RICHARDS, Ph. D., and a Section on X-rays by H. K. PANCOAST, M. D., of the University of Pennsylvania. Octavo, 509 pages, with 356 illustrations and 6 plates. Cloth, \$4.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1911.

This is an excellent work on general Electro-medical-physics and emanating from such authors, its thoroughly scientific character is assured. The author's mode of grouping all electrical modalities in considering their therapeutic value seems to us a happy synthesis. The collaboration of several authors gives one a broad view of, and a thorough introduction to, the subject of electricity in its applications to therapeutics. The reading of such a work, followed by the study of monographs and the direct observation of the clinical methods of application employed by the authorities mentioned in the author's preface will prepare any practitioner to take up the practice of electrotherapeutics with credit to himself and justice to his patient.

A. H.

Currents of High Potential of High and Other Frequencies. Second edition. By WILLIAM BENHAM SNOW, M. D. New York City: Scientific Author's Publishing Co., 1911.

This work has been entirely revised, rewritten and enlarged. Forty cuts have been added, and the chapters on High Frequency currents and therapeutics have been revised and rewritten. The developments in the subject of hypertension and its treatment by the D'Arsonval current, as well as the employment of direct D'Arsonvalisation in the treatment of

infection, have been thoroughly considered in this edition. This book contains an enthusiastic and thoroughly conscientious authority on the employment of these electrical modalities. Electrotherapeutics are gradually gaining a more scientific recognition in the doctor's armamentarium and we know of no book in English nor no authority who is better qualified to speak in relation to the use of currents of high potential than Dr. Snow. It is significant that seventy-two pages are devoted to static modalities and the remaining one hundred and seventy-nine pages to the High Frequency current. This is a valuable book for every one who is interested in electrotherapeutics to own.

A. H.

Nursing in the Acute Infectious Fevers. By GEORGE P. PAUL, M. D., Visiting Physician to the Samaritan Hospital, Troy, N. Y. Second Revised Edition, 12 mo of 246 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$1.00 net.

The second edition of Dr. Paul's work has been carefully revised. Some of the chapters have been rewritten and considerable new material has been added to the work.

In the chapter which considers typhoid fever is a new section devoted to paratyphoid fever. A new chapter, "Acute Anterior poliomyelitis, is included in the book. Many new practical points have been added to the chapters on "Reduction of Fever," "Alleviation of Symptoms," "Detection of Complications," "Urine and its Examination," and "Poisons and their Antidotes."

The book is certainly of great practical value to nurses. It is systematically arranged, has excellent illustrations, and a good index. T. L.

A Text-Book of Physiology: for Medical Students and Physicians. By WILLIAM H. HOWELL, Ph. D., M. D., Professor of Physiology, Johns Hopkins University, Baltimore. Fourth Edition, Revised. Octavo of 1018 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$4.00 net; half morocco, \$5.50 net.

To those who are familiar with the previous editions of this work it is enough to say that this excellence has been maintained. The same general plan has been adopted with simplicity and lucidity of presentation. In the revision it has been aimed to keep the book abreast of the advances in physiological knowledge. Carefully selected foot-note references to the more important original sources are given. While it is to be regretted that they are not as extensive as in the work of Schafer, yet they are very helpful.

Howell clearly presents the evidence not as a dogmatic statement of fact, but shows that about many there is still a difference of opinion. In regard to this he says: "It is important that the student should grasp this conception, because, in the first place, it is true; and in the second place, it may save him later from disappointment and distrust in science if he recognizes that many of our conclusions are not the final truths but provisional only, representing the best that can be done with the knowledge at our command." This is undoubtedly the best modern text-book of physiology in the English language and should prove of great value not only to the medical student but serve as a convenient reference book for the practicing physician.

T. O.

The Bacillus of Long Life. A Manual of the Preparations and Souring of Milk for Dietary Purposes, Together with an Historical Account of the Use of Fermented Milks, from the Earliest Times to the Present Day, and Their Wonderful Effect in the Prolonging of Human Existence. By LONDON M. DOUGLAS, F. R. S. E. Pages 168; illustrations 62. G. P. Putnam's Sons, New York and London. The Knickerbocker Press, 1911.

As indicated in the title, the author treats the subject in a popular way, and he takes up the use of soured milk from an historical point of view, and describes at considerable length the varieties of fermented milks, the chemistry and handling of milk, the preparation of these soured milks in the house and in the dairy. In the last chapter the value of sound milk in health and disease is discussed. The book should prove interesting to the lay reader; the physician also will find useful information concerning milk. There is danger, however, that it will convey to the reader an exaggerated idea of the real value of these fermented milks. T. O.

A Manual of Practice of Medicine. By A. A. STEVENS, A. M., M. D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Ninth Edition, Revised. 12 mo. of 573 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Flexible leather, \$2.50 net.

In the preface to the first edition of this manual, the author states that this book is written with the hope that it may serve as an outline of the Practice of Medicine, which shall be enlarged upon by diligent attendance upon lectures and critical observations at the bedside. Great care has been given to the revision of this work which is now presented in the ninth edition. Much new material has been added and many of the chapters have been rewritten.

The book is to be highly recommended as an excellent outline of the Practice of Medicine, and should prove of great value, especially to medical students.

T. L.

MEDICINE

Edited by Samuel B. Ward, M. D., and Charles K. Winne, Jr., M. D.

A Case of Complete Heart-Block in Diphtheria, with an Account of Post-Mortem Findings.

G. B. FLEMING and A. M. KENNEDY. *Heart, Vol. II, No. 2, November, 1910.*

Though heart-block has been quite fully studied in chronic heart disease, but few cases have been reported in acute affections. This may be due to the fact that it has been recognized only occasionally and not to the fact that it is especially rare. Cases have been described in influenza, rheumatic fever, ulcerative endocarditis, typhoid, pneumonia, and in one case of diphtheria, but in only four cases have autopsies been made. In one of these, a case of acute rheumatism, the block lasted for two months, the patient ultimately dying from enteric fever. Inflammatory lesions were found in the auricular-ventricular bundle. In the second case, one of ulcerative endocarditis, an ulcer was found on the surface of the intraventricular septum. In the third case, one of acute gonorrhoeal endocarditis, there was an acute necrosis of the intraventricular septum with thrombosis of the blood vessels. Lastly, in a case of diphtheria, examination of the heart, including the A.-V. bundle, showed the presence of a very severe parenchymatous degeneration.

The writers report the following case: A girl, ten years of age, was admitted on the fifth day of a typical and severe attack of diphtheria. The pulse was 96 to the minute. The general toxæmia was severe. The day after admission the patient's pulse rate fell to 62, rising the next day to 88, but falling in the evening to 40. The third day after admission, the eighth day of disease, the pulse varied between 80 and 52, the next day between 72 and 48, and on the tenth day of disease between 62 and 40. The patient died on this day. Two days before death the heart was considerably dilated. There was very rapid and obvious pulsation in the neck, just above the clavicles, which tracings showed to be due to auricular contractions. On the day before death there were signs of a palatal paralysis, the voice was nasal and fluids were regurgitated through the nose.

At autopsy the heart was found to be distinctly dilated and rather pale in color. Microscopic examination of sections of the intraventricular septum in the region of the A-V. bundle showed that the A-V. node and the first part of the A-V. bundle were involved in a well marked acute inflammatory condition. There were a number of focal collections of round cells and very congested capillaries in the node and the upper half of the bundle. The lower half of the bundle showed nothing abnormal. There were a number of similar inflammatory foci with congested capillaries in the auricle bordering on the nodal tissues. There was much evidence of interstitial myocarditis in both the ventricular and auricular walls. Some of the muscle fibres in the auricular wall had undergone fragmentation. The infiltrating cells were largely

lymphocytes though there were a few leucocytes in some areas. The vagus nerves were carefully examined for degenerative changes but none were found.

Tracings of the radial pulse and the pulsations in the neck (auricular contractions transmitted through the jugulars) were taken on the three last days of the patient's illness, and all show the same thing: complete heart block. The auricles and ventricles were beating entirely independently of one another, the one at the rate of 110 and the other at that of 46 per minute. Tracings taken of the radial pulse and the apex beat show that they were absolutely synchronous.

The writers consider the question whether the block may not have been due to the toxic stimulation of the vagi, as heart-block has been experimentally produced by stimulation of the vagi and this patient had signs of palatal paralysis, but as the heart-block in this case existed for at least three days before the palatal paralysis set in and as there were no signs of degeneration of the vagi made out on microscopical examination, they conclude that the condition was dependent upon the numerous inflammatory foci in the auricular-ventricular node and bundle, interfering with the proper conduction of the contraction-stimulus from auricle to ventricle.

The case is of especial interest in that it demonstrates that death in diphtheria, where the heart rate is slow and where signs of palatal paralysis are present, are not necessarily due to inhibitory cardiac impulses.

The article is illustrated by reproductions of the tracings and microphotographs of sections of the A-V. node and A-V. bundle, showing the inflammatory foci.

A Study of the Elimination of Phenolsulphonephthalein in Various Experimental Lesions of the Kidney.

A. B. EISENBREY. *The Journal of Experimental Medicine*, Vol. XIV, No. 5, November, 1911.

This work described in this paper was suggested by the report by Geraghty and Rountree on the successful use of phenolsulphonephthalein as a clinical test of the functional activity of the kidneys. The writer has applied the test to normal animals and to those with a variety of renal lesions, including "spontaneous nephritis," several forms of experimental nephritis, and conditions due to mechanical injury of the kidney.

The animals used were female dogs. They were in a good state of health and nutrition, and except for three with "spontaneous nephritis" were free from renal disease so far as could be ascertained by routine examination of the urine for albumin and casts. The technique was in general the same as that recommended for clinical use by Geraghty and Rountree. Shortly after the ingestion of a considerable amount of water, to ensure a free flow of urine, the animals were injected subcutaneously with a cubic centimeter of the standard solution of the dye,

equal to 6mg. of the dry substance. The animals were then catheterized at frequent short intervals until the beginning of the elimination of the drug had been noted. Following this the total urine for one and two-hour periods was collected by catheter and the percentage of elimination of the dye determined by the Duboseq colorimeter according to the method used by Geraghty and Rountree in their clinical work. Although no especial aseptic precautions were employed, no local irritation or other untoward effect was noted as the result of repeated injections of the drug.

Normal dogs.—Tests were made 79 times on normal animals, of which 27 were repetitions which were made in order to ascertain the degree of variation, if any, that might be expected under normal circumstances or as a result of changes in diet and environment. The average time of the appearance of the drug was found to be five minutes, varying from four to eight minutes. The elimination for the first hour varied from 40 to 60 per cent., and for the second hour, from 15 to 25 per cent. The average totals for the two-hour period was 72.33 per cent. The twenty-seven repeated tests gave as an average for the first hour an elimination of 50.55 per cent, and for the second hour of 22.59 per cent., a total of 73.14 per cent.

From these figures it is seen that the total elimination for two hours is 60 to 80 per cent. with an average of about 70 per cent., figures which correspond to those of Geraghty and Rountree for the normal kidneys of man.

Spontaneous nephritis.—Tests were made on three dogs with this condition. The time of appearance of the drug was respectively six minutes, eleven minutes and six minutes. The average elimination for the first hour was 35.8 per cent., and for the second hour, 17.8 per cent., an average total for the two hours of 53.6 per cent. These urines contained, respectively, a "large trace," a "heavy trace" and a "trace" of albumin. These dogs were later examined after they had been kept under improved conditions upon a diet of dog biscuit and an abundance of water. Their urines now contained albumin respectively as follows: "none," "trace," "none." The elimination time was reduced to six minutes, nine minutes, and five minutes, respectively. The average elimination percentages for the first hour, the second hour and the total period were now, 47.43 per cent., 17.56 per cent., 65 per cent. This improvement in albumin content of the urine and in the percentage of elimination of the phthalein is very striking and is perfectly analogous to the results of Geraghty and Rountree, who found that if surgical patients were given careful pre-operative treatment, when the elimination test was dangerously low, a marked improvement in elimination occurred.

Experimental acute nephritis was induced in several dogs by the use of one of the following renal irritants: uranium nitrate, potassium chromate, cantharidin, arsenious acid (arsenic trioxide), diphtheria toxin. These tests showed that renal irritants may cause a slight preliminary rise in the total phthalein elimination, which, however, is usually followed by

a marked decrease corresponding closely to the dosage of the irritant and the degree of kidney injury. The arsenic had much less effect than any of the other drugs. The decreased elimination may occur abruptly on the first day, as after cantharidin, or on the second day, as after uranium nitrate, or it may occur more gradually. The point of lowest elimination corresponded to the most severe intoxication, and not infrequently was accompanied by signs of approaching anuria. There was also usually a delay in the first elimination time.

Similar results were obtained after the production of nephritis with *crotalus venum* and haemolytic immune serum. Nephrotoxic immune serum, however, caused an increase in the total elimination. It was the only form of nephritis studied which did not cause a diminution in the total elimination.

Prolonged experimental renal anaemia also produced a marked nephritis with corresponding reduction in the total elimination of phenolsulphonephthalein, and an increase in the elimination time, both of which results tended to clear up by the third day.

Experimental reduction in kidney substance caused a short period of lowered functional activity, followed by a period of compensatory hyperactivity which reached its height in about five days and was in turn followed by a return to the lower level in about fifteen days. After further reduction in the amount of renal substance, however, there ensued a permanent reduction in the functional activity of the kidney.

The writer concludes in part as follows:

The study of a variety of experimental renal lesions in the dog demonstrates that the phenolsulphonephthalein test of Garaghty and Rowntree is one of the most satisfactory and at the same time most delicate methods of estimating the functional activity of the kidney.

The test is a reliable method of demonstrating improvement in the functional acitivity of the kidney.

Experimental Acute Nephritis: The Elimination of Nitrogen and Chlorides as Compared with that of Phenolsulphonephthalein.

J. HAROLD AUSTIN and A. B. EISENBREY. *The Journal of Experimental Medicine, Vol. XIV, No. 4, October, 1911.*

This investigation was taken up as complementary to the studies abstracted in the last paper. The determination as to whether or not the elimination of the dye parallels that of nitrogen and the chlorides is of importance in judging the clinical value of the functional test with phenolsulphonephthalein.

Dogs were used for the experiments. They were kept in metabolism cages and after a preliminary period of observation were placed on a constant diet. Experimental nephritis was produced in various ways and the total urine tested for nitrogen and chloride elimination.

The methods used were those usual for such work. The elimination of phenolsulphonephthalein was determined by Geraghty and Rowntree's method.

The writers' conclusions are as follows:

1. Uranium and cantharidin, in the smallest doses capable of producing a distinct nephritis, tend to increase the elimination of nitrogen, probably by stimulating tissue katabolism.

2. Uranium, cantharidin, and potassium chromate, in larger doses, impair the power of the kidney to eliminate nitrogen; but this may not be evident unless the animal is on a high nitrogen diet, and the impairment, when due to potassium chromate, may not persist more than one day.

3. Small doses of uranium and of cantharidin cause a transient increase of chloride elimination which corresponds in a general way to the excess in diuresis.

4. Large doses of uranium and of chromate cause a fall, usually transient, in the chloride elimination. This may, however, be diminished 40 per cent for twenty-four hours without evidences of intoxication (vomiting).

5. The anatomic appearance of the kidney varies somewhat with the poison used and greatly with the period of survival after administration of the poison, but bears no definite relation to the nitrogen, chloride, or phenolsulphonephthalein elimination; marked anatomic alteration is compatible with normal elimination of all these substances and with freedom from symptoms of intoxication (vomiting).

6. The decrease in the elimination of phenolsulphonephthalein, which occurs in uranium, chromate, and cantharidin nephritides, and which, in a general way, is proportional to the dose of the poison, bears no constant relation to the changes in the nitrogen or chloride elimination.

7. A marked decrease in the elimination of the phthalein occurs synchronously, as a rule, with the onset of the symptoms of intoxication (vomiting), and therefore the phenolsulphonephthalein test would seem to be a better indicator of the ability of the kidney to eliminate the toxic substance responsible for the symptoms of renal insufficiency than are either the anatomic changes or the elimination of total nitrogen or of chlorides.

The Causes of Ascites: A Study of Five Thousand Cases.

RICHARD C. CABOT. *The American Journal of Medical Sciences, Vol. CXLIII, No. 1, January, 1912.*

In this study the writer has tabulated from the records of the Massachusetts General Hospital. 1. The actual causes of 224 cases of ascites as found post mortem in 2,217 autopsies. 2. The clinical diagnoses of ascites made in this hospital in the last forty years. Most of these diagnoses rest on clinical evidence alone, but some of them have been verified by operation or autopsy. 3. The rate at which ascites accumulates in different diseases. This latter tabulation has been made in

the hope that the information may be of assistance in identifying through their more or less characteristic *tempo* the accumulations of the different diseases.

The causes of ascites, as found 224 times at autopsy, were as follows: Cardiac weakness (valvular or parietal), 89; neoplastic peritonitis, 28; other intra-peritoneal neoplasms, 16, making a total of 44 due to new-growth; renal disease, 26; cirrhosis of the liver, 23; tuberculous peritonitis or tuberculous adenitis, 15; adherent pericardium, 9; puerperal eclampsia, thrombosis of intra-abdominal vessels, chronic fibrous peritonitis, uterine myomata, each 3; intestinal obstruction, 2; pancreatitis, ovarian cyst, acute yellow atrophy of the liver, status lymphaticus, each 1. In all of these cases at least one quart of fluid was present. Cases of haemoperitoneum and septic peritonitis are omitted. All the cases of adherent pericardium were associated with very extensive peritoneal thickening and should perhaps be grouped with either the cases of cardiac weakness or with those of fibrous peritonitis.

In the forty-year period, from 1870 to 1910, there were observed clinically 3,086 cases of ascites, of which the causes were as follows, rated in order of frequency, the heart and kidney cases being only approximately correct: Cardiac weakness, 1,397; renal disease, 665; hepatic cirrhosis, 325; peritoneal tuberculosis, 263; intestinal obstruction, 86; ovarian tumors, 63; uterine myomata, 55; intra-abdominal carcinoma (intestinal, 56; peritoneal, 53; hepatic, 30), 139; pericardial adhesions, 36; pernicious anemia, 15; leukaemia, 11; thrombosis, 10; abdominal lymphoma, 4; visceral syphilis, 2.

The relative order of frequency in these two tables is about the same for the first six causes except for the much greater number of cases of ascites with carcinomata in the first grouping, as might be expected. Other points of interest in the second table are the relative importance of ovarian tumors as a cause of ascites, and also the large number of cases of ascites due to intestinal obstruction. Possibly many of these latter were associated with beginning acute general peritonitis.

It is interesting to note the percentage of these various causes of ascites which were associated with the condition. The list is as follows: Cirrhosis of the liver, 88 per cent; thrombosis, 84 per cent (portal, 100 per cent, of vena cava 100 per cent, mesenteric 80 per cent); tuberculous peritonitis, 82 per cent; neoplastic peritonitis, 82 per cent; adherent pericardium, 76 per cent; malignant lymphoma (thoracic and abdominal), 50 per cent; intestinal obstruction, 43 per cent; syphilis of liver, etc., 40 per cent; renal and cardio-renal, 29 per cent; cardiac, 28 per cent; carcinoma, other than peritonitis, 23 per cent; ovarian tumors, 13 per cent; leukaemia, 13 per cent. Of the heart cases it is of interest to note that all the cases of combined mitral and tricuspid regurgitation were associated with ascites.

Of solid tumors of the ovary there were 48 of cancer, of which 40 per cent showed well marked ascites. There were 20 cases of fibroma of the ovary, of which 50 per cent showed ascites. There were five

cases of sarcoma of the ovary, of which only one (20 per cent) showed ascites. Of the 391 cases of ovarian cyst operated on at the Massachusetts General Hospital in the year 1870 to 1910, only 31, or 7.9 per cent showed ascites. In 8 of these the fluid was bloody or chocolate colored. In one of them the fluid measured 17 quarts. Of the cases of uterine fibroids only 7 per cent showed ascites; in 4.6 per cent it was in large amount.

The writer has calculated the rate of accumulation of ascites in the principal affections with which it is associated. He finds it to be as follows: Cardiac weakness, 36-54 ounces per day; cirrhosis of the liver, 20 ounces per day; chronic nephritis, 13 ounces per day; solid tumors of the ovary, 12 ounces; neoplasms of the abdominal organs and glands, adherent pericardium (before cardiolytic), each 11 ounces; adherent pericardium (after cardiolytic) 2 ounces; uterine fibroid; 8-10 ounces; tuberculous peritonitis, 5-6 ounces.

The Albumin Reaction of the Sputum. (Albumino-reaction des Expectorations).

ROGER AND LEVY-VALENSI. *La Presse Medicale*, No. 32, April 2, 1910, p. 289.

Technique.—The sputum should be collected in a dry receptacle.

As far as possible it should not be mixed with saliva, nor blood, and should be examined soon after expectoration, especially in warm weather. Putrefaction alters the mucus percentage and may affect the albumin.

An equal volume of distilled or ordinary water is added to the specimen and the mixture thoroughly stirred with a glass rod.

Coagulation of the mucus is the next step. For this purpose, several drops of acetic acid are added. This is the difficult part of the test. An excess of acid may hinder the later precipitation of albumin, while too little allows some of the mucus to remain uncoagulated. The amount necessary varies in different cases. To avoid mistake, the filtrate should be tested with a drop or two of acetic acid.

The filtration may be completed through ordinary filter or better Chardin paper. If conglomerate particles are first removed it should not take more than two or three minutes.

The ordinary tests for albumin in the urine may be used. The author employs the heat test and the potassium ferrocyanide.

Diagnostic Value—Tuberculosis.—All definitely tuberculous individuals have albumin in their sputum. This is especially true in the second and third stages of the disease, when it would be of comparatively little diagnostic value as other signs are clear by that time. The author has, however, found albumin in the sputum of a number of incipient cases. In one it appeared only during a tuberculin reaction. Absence of albumin in a patient presenting slight signs of tuberculosis may be considered as a sign of latency. Albumin was not found in the sputum of a patient with acute miliary tuberculosis. In acute caseous pneumonia it may be expected and was present in five cases.

Pleurisy.—Albumin was found in the sputum of five patients in whom the pleurisy was evidently tuberculous and absent in the sputum of a patient whose pleurisy was probably not tuberculosis.

Pneumonia.—Albumin is present in the sputum of practically all patients suffering from the different forms of pneumonia, but disappears two or three days after the crisis. Its persistence, according to the author, indicates imminent relapse or a complication. In old people it has an especial tendency to persist.

Bronchitis.—In some patients suffering from albuminuria or heart disease, albumin may be found, but in practically all forms of bronchitis and in emphysema, the sputum is free from albumin.

In two cases of syphilis and one of cancer of the lung, the albumin test was negative.

The author considers the test of considerable diagnostic value. Specimens containing mucus only indicate the presence of increased secretion. Those containing albumin point to the foundation of inflammatory exudate.

NEUROLOGY

Edited by Henry Hun, M. D.

The Advantages of the Use of a Larger Amount of Spinal Fluid in the Wassermann Reaction for Neurological Diagnosis (Die Vorteile der Verwendung grösserer Liquormengen [“Auswertungsmethode”] bei der Wassermannschen Reaktion für die neurologische Diagnostik).

ALFRED HAUPTMANN. *Deutsche Zeitschrift für Nervenheilkunde, 42 Band, 3 und 4 Heft, 18 September, 1911.*

Hauptmann has for several years investigated the methods of examination of the cerebrospinal fluid in doubtful cases for a differential diagnosis between cerebrospinal syphilis and multiple sclerosis, and ascertained that some elaboration was needed in order to obtain a positive reaction where the customary methods gave negative results. His experiments were conducted under proper control.

The value of the other cytological and serological examination of the cerebrospinal fluid and of the blood is somewhat limited. The most valuable indication is the increase in albumen, especially of the globulin, now known as the phase I-reaction, which occurs in cerebrospinal syphilis in practically one hundred per cent of the cases. This is associated with pleocytosis, which on the one hand is not always present in cerebrospinal syphilis, and, on the other, appears in multiple sclerosis in cases in which syphilis has been acquired without the necessity of a specific infection of the central nervous system. The Wassermann reaction in the blood fails in about twenty per cent of established cases of cerebrospinal syphilis, and in cases of multiple sclerosis appears at the best in the cerebrospinal fluid in not more than twelve per cent.

Hauptmann's researches included examinations involving five different amounts of cerebrospinal fluid, and determined that there is no difference

in the responses unless the entire amount of fluid used exceeded five cubic centimeters. The value of these examinations is not in the differential diagnosis between multiple sclerosis and cerebrospinal syphilis but rather in the determination of a non-syphilitic disease of the brain or cord from one of syphilitic or metasyphilitic origin.

In locomotor ataxia a negative result of the Wassermann reaction in the cerebrospinal fluid occurred in eighty-one per cent of the cases when the original Wassermann method was employed, whereas with the revised procedure the number of positive cases was very greatly increased and was practically universal. The same was true of cases of general paresis.

The patients examined by Hauptmann included: cerebrospinal syphilis, multiple sclerosis, tumor and abscess of the central nervous system, epilepsy, apoplexy and softening of the brain, general paresis, locomotor ataxia, other diseases of the nervous system, and normal patients.

Of the forty-four cases of cerebrospinal syphilis in which a negative result was obtained by the original Wassermann method, a positive reaction was obtained forty-two times when the larger quantities of cerebrospinal fluid were used, that is, in practically ninety-six per cent. The two cases which did not respond were not suffering at the time from cerebrospinal syphilis. The positive reaction signifies in the vascular cases the existence of syphilitic endarteritis, whereas the negative result with a positive blood reaction indicates arteriosclerosis in which lues is an incident, and just as the negative reaction indicates a non-syphilitic process of the nervous system, so does it assist in the diagnosis of other diseases, as multiple sclerosis, tumor, abscess, apoplexy, softening of the brain due to arteriosclerosis, epilepsy, meningitis, peripheral neuritis, alcoholism, cerebral concussion, hydrocephalus, hysteria, neurasthenia, mental affections, constitutional diseases, etc.

In all of these diseases there was no Wassermann reaction in the cerebrospinal fluid whether the reaction in the blood was positive or not. In the metasyphilitic diseases, among which were included six cases of incipient paresis, in which the response was negative after the original method, positive results were obtained when the larger quantities were used.

A Contribution to the Study of Chorea Minor and the Psychoses of Chorea. (Zur Lehre von der Chorea minor und den Chorea-psychosen.)

PH. JOLLY. *Wiener klinische Wochenschrift*, Nr. 29, July 20, 1911.

Symptoms of chorea appear in many conditions, as idiocy, cerebral apoplexy, general paralysis of the insane, multiple sclerosis and other organic diseases of the brain, as well as during the course of acute articular rheumatism associated with delirium. From all of these may be differentiated acute and chronic choreas. The former includes Sydenham's chorea, with which may be considered chorea gravidarum, and

occasionally senile chorea not due to arteriosclerosis of the brain. The term "chronic chorea" is limited to the form of Huntington, with or without a hereditary basis, progressing gradually toward profound dementia. In chorea minor mental changes occur practically always, although sometimes very slight in extent but frequently developing to the point of a pronounced psychosis. In institutions for mental diseases only a few of these cases are found—about two in every thousand patients.

Many different explanations have been given as to the cause of chorea and associated mental disturbances, dating back as far as Copland's paper in 1821. The earlier contributions favored the probability of multiple emboli of the brain. Later, beginning at about 1890, the infectious process was accepted as the probable natural condition, and there have been a great many contributions in support of this theory, although Charcot and his pupils placed great emphasis upon inherited predisposition. This, of course, led to a compromise theory of the probable elements of heredity, and infectious, or toxic conditions.

It appears to Jolly that numerous different elements are concerned in the production of the disease. He believes that there are cases in which no evidences of infection may be determined, even when hysterical chorea is eliminated from discussion. In 121 cases, for instance, reported by Köster, in 26 of which an infectious cause was absolutely eliminated, there had preceded the symptoms of chorea such conditions as slight abrasions of the skin, nasal catarrh, bronchitis, angina, laryngitis, otitis, vaccination, pneumonia, measles and scarlet fever, besides cases associated with articular rheumatism and endocarditis.

It has also been suggested that certain young people are afflicted with chorea who live in unsanitary conditions, and in this may be included children who live in closely confined quarters or who are placed in schools in close compact classes in association with other children, so that a condition of nervousness is often induced by anaemia, scrofula, malnutrition, and other harmful disorders.

For the cases of chorea gravidarum, it may be necessary to assume some form of autointoxication, as occasionally a patient appears to have been otherwise mentally and physically in perfect health.

In senile chorea, not infrequently some form of infectious condition may be determined, and disturbances of circulation and of digestion may affect the activity of the brain. Mental causes are occasionally found, as shock, or fright, and anger, just as these conditions may prove the exciting cause of cerebral apoplexy, inasmuch as they induce considerable vasomotor disturbance.

It would seem then that in the individual case the predisposition, either natural or acquired, provides an underlying opportunity, especially through weaknesses of the nervous system, upon which chorea may be imposed by infectious diseases, especially articular rheumatism, mental influences, and irregular processes in the generative organs.

The catalogue of mental symptoms arranged by Jolly includes almost every form of abnormal psychic process, from slight changes in sensibility to severe delirium, and practically every manifestation of acute mental disorder is included in this list. When chorea is directly involved in an infectious process and the symptoms are associated with fever with progressive mental disturbance, diminution or loss of consciousness is almost the rule.

The Present Standpoint of the Significance of the "Four Reactions" in the Differential Diagnosis of Organic Nervous Disease (Der heutige Standpunkt der Lehre von der Bedeutung der "vier Reaktionen" für die Diagnose und Differentialdiagnose organischer Nervenkrankheiten).

M. NONNE. *Deutsche Zeitschrift für Nervenheilkunde*, 42 Band, 3 und 4 Heft, 18 September, 1911.

It is now three years since Erb announced that the serological methods of examination and the study of lymphocytosis proposed by Nissl, together with the increase of albumen in the spinal fluid and the phase I-reaction, offered valuable assistance in the differential diagnosis of syphilitic diseases of the nervous system. Nonne believes that certain definite points may now be entertained. From the 1st of October, 1909, to the 30th of April, 1911, he has applied these tests in 167 cases of locomotor ataxia, 179 cases of general paresis, 97 cases of different forms of cerebral syphilis, spinal syphilis and cerebrospinal syphilis, 68 cases of multiple sclerosis, 38 cases of tumor of the brain, and 14 cases of spinal tumor, both extramedullary and intramedullary.

It is determined that in true syphilitic and parasyphilitic diseases a more or less pronounced pleocytosis appears practically without exception. It is further fairly well established that in the parasyphilitic diseases, tabes and paresis, pleocytosis is in general more pronounced than in the true syphilitic—gummous and arterial—diseases of the central nervous system. A rigid unchangeable law does not prevail in clinical practice, and cases are occasionally seen in which either lymphocytosis or excess of albumen is wanting, and occasionally also cases in which both of these do not appear.

Of the 167 cases of locomotor ataxia observed by the author, all four reactions were wanting in eleven uncomplicated cases. Four of these instances were stationary, and the others were incipient cases. Of the so-called true syphilitic diseases of the nervous system the arterial form of cerebral syphilis (syphilitic hemiplegia) not infrequently lacks either one or both of these two reactions. So-called syphilitic spinal paralysis with or without an anomaly of the pupils may exceptionally lack lymphocytosis, and phase I has occurred in two cases of the writer.

In some non-syphilitic diseases, both lymphocytosis and phase I may

be present. Only very seldom are these reactiones pronounced, and usually are quite weak and may fail altogether. This applies most especially to multiple sclerosis, and only once in this disease has a pronounced phase I been seen. For diagnosis the rule is that a negative result or a very weak response of both reactions is in favor of the diagnosis and the exceptions are infrequent. The rule in cerebral tumor is that both reactions are negative, but a weak lymphocytosis and phase I occasionally appear. In tumor of the spinal cord the conditions are somewhat different. In seven of fourteen, a reasonably strong phase I-reaction with pleocytosis, either wanting or very weak, was noticed for several months and could not be regarded as accidental. It is worthy of remark that either slight or pronounced lymphocytosis appeared in individuals who have at some time suffered a syphilitic infection without resulting organic disease of the nervous system. It is also noticeable that outspoken phase I indicates that the nervous system is not intact. One neurasthenic, one epileptic and one alcoholic, either with or without apparent syphilis in the history, revealed no phase I-reaction, and the writer has only observed two exceptions to this rule in several hundred cases. Presence or failure of lymphocytosis is not to be excluded from a syphilitic disease of the nervous system, but it is not of value for the differential diagnosis between syphilitic and parasyphilitic infections. Presence or failure of the phase I-reaction is not to be excluded from the differential diagnosis between organic syphilitic and non-syphilitic disease, but is valuable in differentiating functional and organic disorders.

The Wassermann reaction is to-day recognized as not decidedly valuable as a revelation of specific disease. This question has been under consideration for three years, and the Wassermann reaction in the blood has been found in malaria and in certain stages of scarlatina, and it has been thought to be observed in certain cases of pulmonary tuberculosis, carcinoma and diabetes mellitus. In one disease which is of practical importance in this connection, the Wassermann reaction is positive not infrequently: that is, multiple sclerosis. The Wassermann reaction has also been found in cases of paresis and locomotor ataxia in which no history of syphilis was obtained. This simply emphasizes the fact, and that evidence of syphilitic infection cannot always be proved. This reaction, however, gives strong corroborative evidence of the syphilitic origin of certain conditions. In locomotor ataxia it is present in sixty to seventy per cent of the cases, and on the other hand not infrequently with a positive history of syphilis the Wasserman reaction is absent as well from five to ten per cent of cases of general paresis. An examination of the families of syphilitics has shown that their consorts and children generally give a positive Wassermann reaction in the blood serum, and this has been found as well in functional nervous diseases as in healthy individuals. The reaction has also been found in twenty-four per cent of chronic alcoholics who have given no history of syphilis. This leads to the conclusion that a negative Wassermann

reaction in the blood speaks neither for nor against a syphilitic disease of the nervous system. Absence of the Wassermann reaction in the blood is strong evidence against the presence of paresis but does not absolutely exclude it. The presence of the Wassermann reaction in the blood necessitates that a case of suspected neurasthenia or nervousness should be held under further observation, as the possibility of an early stage of general paresis must be considered in a case of neurasthenia carrying evidence of syphilis. In such a case it is difficult to say how long the diagnosis of incipient paresis should be held in doubt, as in cases of apparent epilepsy with positive history of syphilis, and also in cases of neurasthenia, alcoholism, and maniacal-depressive insanity in whom a history of syphilis is determined. For assistance in these cases the strength of the reaction in the blood has been studied, and if the response is positive in the higher grades, the presence of syphilitic disease of the cerebrospinal structures is established.

The value of the Wassermann reaction in the blood lies in the fact that if it is positive it simply indicates that the patient was at one time syphilitic but there is no assurance that the ailment under consideration is of syphilitic origin, and, secondly, if the reaction be negative it is not definitely determined that in a not small minority of the cases both the previous syphilitic infections may have existed and the disease under consideration may be of syphilitic origin.

As to the results of the Wassermann reaction in the examination of the spinal fluid, it has been asserted that it was positive in practically all cases of general paresis, as well as in locomotor ataxia, although there have been reported certain exceptions to this. Exceptions have been taken to this after the original method of Wassermann. The reaction has failed in numerous cases of cerebrospinal syphilis and in the early form of cerebral syphilis. It has been found that the anti-bodies in tabes and cerebrospinal syphilis are present, but in so small quantity that they could not be ascertained except through the use of a larger amount of spinal fluid or a smaller quantity of the complement. With the use of greater quantity of spinal fluid, that is of one cubic centimeter or more, these anti-bodies may be recognized; consequently, a negative reaction in the spinal fluid in tabes and in cerebrospinal syphilis is not to be established with recourse only to the original method of Wassermann; that is, with the use of not more than two cubic millimeters of fluid.

The value of these reactions may be classified as follows:

1. *Examination of the blood.*

Wassermann reaction; (a) *positive*: characteristic for syphilis, (slight, practically little value); pronounced positive reaction, occasional cases of scarlatina, malaria, framboesia, leprosy, plague. A positive Wassermann reaction of the blood serum indicates nothing further than that the affected individual at some time or other has been infected with syphilis, either hereditary or acquired, and does not indicate that the existing disease is necessarily of luetic nature.

Negative: is to be regarded as speaking against paresis inasmuch as, with rare exceptions, the blood of paralytics reacts positively to the Wassermann test.

2. *Examination of the cerebrospinal fluid.*

(a) Normal fluid: pressure 90 to 130 m.m.; phase I-reaction negative. Greatest amount of cells in a cubic centimeter, five to six. The Wassermann reaction carried out after the original method negative.

(b) Pathological fluid: (1) High pressure of the escaping fluid of over fifteen cubic millimeters; (2) Positive phase I-reaction; (3) Increased number of cells. These three symptoms in combination or singly indicate the presence of organic disease of the central nervous system, either specific or not. (4) In disease of the central nervous system of luetic nature the Wassermann reaction was present in the spinal fluid. If this Wassermann reaction carried out after the original method is positive, there is the greatest possibility that the case is one of general paresis or taboparesis, and less frequently one of cerebrospinal syphilis or of pure locomotor ataxia. In most cases of general paresis, the Wassermann reaction is positive with the use of only two cubic centimeters of spinal fluid. In a few cases of general paresis, in nearly all cases of cerebrospinal syphilis and of locomotor ataxia, the Wassermann reaction is positive only when a larger amount of cerebrospinal fluid is used.

The Facial Phenomenon and the Neuropathies of Youth (Fazialisphänomen und jugendliche Neuropathie).

KARL HOCHSINGER. *Wiener klinische Wochenschrift*, Nr. 43, 26 October, 1911.

In 1891 Loos found Chvostek's facial phenomenon in a large number of children, and this symptom was isolated, and without either Erb's or Rousseau's phenomenon; that is to say, without any other symptom of tetany. The patients were nervous children, and a small number suffered from organic lesions. Hochsinger later related a similar experience, and has investigated the relations of this phenomenon to the nervous conditions of children in general. It may be assumed that an isolated facial phenomenon has some pathological significance, as it is not seen in healthy children. The patients may be divided into two groups: first, those in whom symptoms of over-excitability in earlier years have appeared with the facial phenomenon, especially in those who have had eclamptic attacks or respiratory spasms; and, second, in children who have presented no symptom of over-excitability or spasm in earlier life.

Of great significance in the older children is the fact that more than half the mothers have presented this phenomenon, and practically all of the nursing children of these mothers who have had eclamptic seizures or spasm of the larynx have also presented the facial phenomenon. Hochsinger found the symptom in 101 of 117 children; associated with

pavor nocturnus in twelve cases, nervous dyspepsia in twenty-nine cases, migraine in ten cases, epilepsy in three, enuresis in eleven cases, pronounced self-abuse in nine cases, and hysterical cough in one case. Of the mothers of these 101 children, sixty-one presented the facial phenomenon. A very small percentage, only sixteen, of older neuropathic children were free from the condition.

Hochsinger also observed the symptom in Mongolian idiots or in Mongoloid idiots, as well as in congenital myxedema and in simple idiocy, and in a number of cases of congenital syphilis. The symptom appeared much more frequently in girls than in boys, in the latter appearing usually between the twelfth and sixteenth year, and in the former persisting for a longer time, so that it may be observed in undiminished intensity long after the twentieth year, remaining even after children have been born, and disappearing inevitably after the menopause.

Hochsinger's observations point to the following conclusions:

First. Isolated facial phenomenon in older children and youth is significant of a pathological state.

Second. It is the inevitable symptom of a congenital neuropathic constitution derived from the parents, especially the mother, as is shown by the very frequent presence of a similar phenomenon in company with functional neurosis.

Third. Isolated facial phenomenon is the principal attribute of mental over-excitability and nervousness of the adolescent period, and occurs more frequently in women than in men.

Fourth. Adolescent nervousness and infantile over-excitability, especially the tendency to spasms of nursing infants, are genetically associated, and are due to a hereditary neuropathic defect.

The Lenticular Nucleus Syndrome (Das Linsenkernsyndrom).

G. MINGAZZINI. *Zeitschrift für die gesamte Neurologie und Psychiatrie,* VIII Band, 1 Heft, 28, November, 1911.

The author has had an abundance of material, covering several years, which justifies him in attributing a definite symptom complex to lesions of the lenticular nucleus. Some difficulties have attended the investigation: first, because the old designation of corpus striatum is used by so many writers who have not differentiated between the putamen and the caudatus; second, because of the traditional theory that lesions of the lenticular nucleus involve symptoms to be attributed to the internal capsule; and, third, because many investigators persist in attributing the function of the lenticular nucleus to any one of its segments as a unit, ignorant of the fact that the anterior, the middle and the posterior part are very distinct, not only in structure but in function.

Mingazzini has determined beyond dispute that the lenticular nucleus may be divided into three segments: an anterior or *portio caudata*; a middle segment adjacent to the knee of the capsule or to the anterior

tubercle of the thalamus, the so-called *portio genualis*, and a posterior segment; the *portio thalamica* opposite the restiform body of the optic thalamus.

Disturbances of the lenticular nucleus, or expressed most exactly, the putamen, not infrequently are followed by dissociated paresis (of the face and the tongue, or of the face and of the upper limb), or to irritations (of the upper limb) of the opposite side. If the left putamen is affected there is frequently outspoken dysarthria. The most frequent symptom of disturbance of the lenticular nucleus is paresis of the entire opposite half of the body. This paresis of the entire opposite side of the body, is for a while unobserved by the patient, who also complains of paresthesiae or mental weakness, symptoms which are to be more definitely attributed to cerebral arterio-sclerosis. When the individual symptoms are definitely analyzed, it is noticed that the facial paralysis is almost always limited to the lower branch; the upper limb takes no particular attitude, although the forearm shows a tendency to flex itself upon the arm and the hand to flexion upon the forearm; and this attitude is not particularly spastic in character. Passive movements show a slight resistance but seldom cause pain. In the lower limb the affection of movement appears in the thigh, the leg and the foot, and practically never reaches complete paralysis. Walking is nearly impossible without assistance. The patient's steps are short and slow, the leg of the affected side being slightly flexed so that the foot slides over the ground with the appearance of the classical spiral movement. The reflexes are slightly increased.

Placing together the symptoms and the lesions so far as they have been studied, it appears that in cases of faciolingual paresis the anterior portion of both nuclei, or the middle portion of the putamen was involved. If paresis of the lower facial branch with athetoid movements existed, or facio-brachial paresis, there were found multiple foci of the putamen as symmetrical areas of softening in the entire nucleus. In one case of monotremor of the forearm and hand, the middle portion of the contralateral nucleus was involved. In cases of hemiparesis or double hemiparesis, the lesion involved the middle part of the putamen of the opposite side, and usually the lateral border; that is to say, the area of the putamen which in horizontal section lay near the knee of the capsule or the anterior tubercle of the thalamus. In the case of dysarthria the middle portion of the left side was involved.

The results of disturbance of the lenticular nucleus may be summed up in a light circumscribed paresis of the face and the limbs of the opposite side, associated with moderate increase of the tendon reflexes of the same side, with also slight inequality of the pupils and atrophy of the extremities, and slight diminution of objective sensibility. When the lesion involves the four posterior fifths of the left ganglion it is accompanied by dysarthria, which may proceed to anarthria. If the lesion affects certain definite portions of the putamen, especially the outer third, it may be accompanied by pseudomyelic paresthesia of one or the other of the limbs of the opposite side.

ALBANY MEDICAL ANNALS

Original Communications

HOW SHALL THE MOTHER TELL THE SEX STORY TO HER CHILD?

Chairman's Address, Section of Public Health, State Conference of Charities and Correction, Watertown, N. Y., October 17, 18, and 19, 1911.

By GEORGE W. GOLER, M. D.,
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The lessons of sex life are so important and the desire for sex knowledge so insistent, that the story of sex and sexual responsibility will have to be taught very early, when the child begins to ask the first question about the origin of its being and the organs of its body. In replying to these questions the child ought not to be put off with fairy tales. It must and will be answered. If not answered by the parent, usually the mother to whom it naturally goes, then it will seek answers from other and less reliable sources. To compel the child to wait for this information until it is of school age is to neglect an opportunity that never returns, and to lose forever a bond of sympathy which a properly told sex story would make between parent and child. The school is not the place in which *first* to teach the elements of sex knowledge to the little child. The school may, in specially arranged classes, give this knowledge to the mother, and she may transmit the information gained in the school to her child; but she, the mother, should be the teacher of the child.

Society has already made a great mistake in neglecting to teach the sex story to its children; and there is now danger that it will fall into an error almost as grave, if it compromises the question by waiting until the child enters school. Those of us who can remember the early desire for knowledge relating to the origin of being, will no longer be willing to wait until

the age of puberty or adolescence to have our children get what they should know of this subject; but on the contrary, if it can be shown that sex knowledge can be given a little child of three or four when it first asks the question, "Where did I come from, mama?"—"Who brought me here?" they will surely be willing to have the story told the very day upon which these questions are first asked. "Mama," said a little boy of three, looking at his navel while in the bath, "what is this?" "Why," said the startled mother, "that is what you hung from, just as an apple hangs from its stem on a tree." "Then," said the child: "Where is the other end?" Now that is what many children are wondering and asking about. They want to know the other end of the sex story; and it must be told the child by his mother, else he will get it later, twisted and distorted, in vulgar form from vicious companions, and when later you attempt to teach him, he already has a depraved impression, and you, his parent, have missed an opportunity in your life.

Many years ago a young mother told me, that when her child asked, "Mother, who brought me," she folded the child in her arms and said: "It was I; you came from a little egg, and you nestled soft and warm within mother's body underneath her heart, and father helped to make it grow, and months passed, spring and summer, and at last when the leaves were falling, out of my body that had nourished you, you came into the world; and when you came it was with much pain to me, but you didn't know; and so I love you for the gladness that you brought to me with the pain. And now, as you know the story, what I have told you is to be between us, father, mother and you; and if anyone tries to talk to you about where little boys and girls come from, you must say, 'I only talk about that subject with my mother and father; for my mother has told me about it and I do not talk with anyone upon that subject but her.' " And further the mother said to the child, "And there are organs of the body which I will tell you about later, and they are as sacred as the story I have told you, and they are to be clean and pure as the thoughts of my child, both for him and for those children who may come to him when he grows to be a man."

Mothers and fathers, you who have dealt with the question of sex with your children, or you who have put it aside and

shifted parental responsibility to the teacher, surely you have never read the reports of the Committee of Fifteen; the reports of the Chicago Vice Commission; the plays of Brieux, translated by Mrs. Bernard Shaw; nor even the beautiful story of Tom Beauling, by Gouverneur Morris; for if you had read any of these you would no longer evade your duty as parents.

A PROGRAMME FOR SEX INSTRUCTION.

Read before the Twelfth New York State Conference on Charities and Corrections, Watertown, N. Y., Oct. 18, 1911.

BY IRA S. WILE, M. S., M. D.,
New York

"The concealment of truth is the only indecorum known to science," wrote Westermarck. In no part of human affairs is this more true than in the veil of mystery that is thrown around the problems of sex and its correlated phenomena.

While it is generally correct that every cause is an effect and every effect is a cause, careful thought will show that the sex problems arise from two fundamental causes. In the last analysis the main problems that are of interest to a conference on charities and corrections arise from a clash of temptation and wills. Society presents one cause, the temptation, though the real social evils of overwork and underpay and delayed marriages, poor-housing facilities with the consequent trials of room-congestion and lack of personal privacy, child labor and the intermingling of children and adults under unnatural conditions and at dangerous times, inadequate opportunity for the expression of the energy of the human species and the train of horrors like dance halls, saloons, boat excursions, family unhappiness and the desire to be somebody and have something that is beyond the daily measure of earnings. All these are but a small part of the ills that can be remedied only through the interaction of the aggregate of individuals that is termed society. This forms the soil from which the sexual weed emanates.

The seed lies within the individual and the fertility of the weed depends upon the essential nature of the seed as gotten from its parents and the character of the soil upon which it is to

fall. The will of the individual is the second important factor that demands consideration. The development of the will of the child is largely in the power of the parents. Children are largely what their parents make them, though their character is constantly undergoing changes due to the reaction to environment. The factor of character development may be guided through adequate education for which the parents should be held responsible. The truths pertaining to sex must not be concealed any longer.

It is not my purpose to consider the origin of external temptation save to remark that the White Slave Traffic, prostitution and similar crimes against the person have their strongest roots in the poverty of the majority of the community as measured by the standard of living that has been established by this conference and in the inequalities of our present industrial system and does not originate in an inherent viciousness of those who fall as victims in the strife.

Society reaps the whirlwind in venereal disease, unnecessary blindness, insanity, marital infelicity, divorces, desertions, invalidism of soldiers and sailors, the preventable mutilation of women and men. In truth, society pays for its shortcomings, just as the body of the individual suffers from malnutrition, alcoholism and sexual abuses.

An opportunity for the removal of at least a large portion of the burden borne by society lies in a wholesale education of the community as to the relation of the social life and the social evils, so-called. Organizations for the betterment of the masses, churches, schools, labor unions, women's clubs, Y. M. C. A.'s, medical societies must unite in a widespread campaign for public enlightenment upon the problems that are generally termed the sex problems. The good example set by the various societies for sanitary and moral prophylaxis in stimulating public opinion must be followed. Not the least of this work of education must be in the hands of the physicians who at present are in possession of the most information upon the subject, at least in its physical aspects. The responsibility for the present general ignorance about the entire sex problem in its widest application to the affairs of the world must be placed upon society as a whole that has been countenancing a double standard of morality.

and refusing to listen to the words of those who have sought to show its error.

In the evolution of the character of a child two large influences are involved: that of the home and that of the companionships of childhood. In the accumulation of information regarding sex, the home as a factor has unfortunately been almost negligible. Parental timidity, or shall I say cowardice, has made it difficult for parents to impart the information regarding reproduction or even the differences of sexes to their children. An unintelligent false modesty has placed the taboo on all references to the development of the emotional and physical side of sex as it seeks for expression at various times in the period of life from infancy to adolescence. The average child of to-day secures the garbed, be fuddled, vulgar ideas that he prizes so highly but dares not even dream of in the vicinity of his parents, from his associates at school, or on the streets, or from the atrocious booklets, issued by some charlatan, that have been placed into his hands for the purpose of creating those false impressions that the child hesitates to talk over with his parents. The home of to-day is largely responsible for the weaknesses of instruction with reference to the development of the physiology of sex and the relation of the individual to the generations unborn.

Parents must come to realize that sex is at the basis of a proper appreciation of many phases of life. The idea of creation as a religious concept is essentially a sex-problem. Biblical literature abounds in allusions to sexual questions that can be appreciated only by the best informed readers. Mythology cannot be read nor understood by the uninformed. Chivalry demands sex knowledge for its comprehension. Literature from the Canterbury tales to Balzac, Tolstoy, Ibsen, Suderman, or the novelists whose names are not to be handed down to posterity, but whose works are for the multitude of to-day, centers about the relations of the sexes. Plautus, Terence, Sophocles, Shakespeare, the modern dramatists make the most of that phase of life that is so frequently termed the human interest. From the Nibelung's Ring to Pellas and Melisande, an initiation into the laws of sex is essential in order to intelligently interpret the operas. Art, painting and sculpture, supplies numerous themes that have arisen from the depths of sex experience. All this

parents know and still they close their eyes and refuse to see the light or to illumine the path for their children. Parents have a tremendous responsibility to their children and no less a responsibility to society. Parental protection is lost in this field of education, where the relation between parent and child should be the closest.

When should parental instruction begin? When the child first expresses a desire to know as evinced by a question. At three years, or four or five, whatever the age may be that finds the youngster seeking information from the parent from whom all other knowledge has been gotten for the asking. Whence comes the baby? What a natural query. The usual answer is most unnatural, for the parent fails usually to tell the truth if any attempt is made to reply in terms other than to tell the child to run away as mother is very busy. The child sooner or later takes the unanswered question to some one who will answer it even though the informant is only a playmate who knows little more about the matter. The first break in the confidence that should exist is thus easily made. At times an evasive or false answer drives the child to seek more light and then the parent is driven back to another falsehood until finally the child's mind grasps the inconsistencies of the replies given upon various occasions or realizes that the parent does not desire to discuss such questions any more. The sense of secrecy arises and then the child feels ashamed of the subject and cannot bring itself to talk frankly with the parent. The opportunity of the child's life has been lost. Henceforth the child must be left to its own devices to ascertain the facts that it wishes to learn, from the playmates, from the gang mates, from pornographic writings, from the charlatan's fear instilling booklet, from misinterpreted dictionary definitions, from posters, lying advertisements, from vicious associates, from cruel traditions and unholy advice, from reading forbidden books and seeing forbidden plays.

Too frequently one hears of the advisability of teaching sex hygiene at puberty. This is too late to begin. The average child of the city has the major part of his sex information, or rather misinformation, long before puberty. To wait for this time is to make the instruction more difficult because the parent who has never spoken to his child regarding the origin of life before

puberty scarcely ever can summon up sufficient courage to broach the subject at this time, when the child has also had created the barrier of shame. In addition, the problem is more difficult, because it is necessary to clear the child's mind of the erroneous ideas before it is possible to establish the weighty truths that are to be imparted. Innocence and ignorance are not the same. The so-called innocent child of twelve years of age is well versed in sex-lore. The training in sex hygiene must be begun at the earliest possible age. The crux of the problem lies not in the few lectures that are at times suggested for the high schools and the colleges. Character is too far developed at this age and habits for good or for bad are well established; in fact, irretrievable harm may already have befallen the child. The education must be started at the earliest opportunity.

The public school has long been urged as the proper place at which to have the instruction imparted. As far as the elementary school is concerned, I believe this is an error, as the subject can be better handled by the individual parents for the individual children. The average teacher of to-day is not fitted to teach the subject. The age variations in a single grade, the variations in mentality, the differences in sex precocity, not to mention sex experience make the teaching of sex hygiene a very difficult problem for the school, even though the instruction is given to the children of each sex separately by a teacher of the same sex. The function of the school is to give children such instruction as cannot be imparted at home, but instruction in sex hygiene is naturally a part of home training although it represents a largely untried field of parental endeavor.

The school may be of assistance in instructing parents how to give the teachings to their children or in special cases at the request of the parents a teacher might take up the question involved with individual children. As class instruction it seems to me undesirable at present. The school by giving adequate teaching in general hygiene and by affording an opportunity for acquiring some fundamental training in biology will be doing its share in making possible intelligent training as to the laws of sex as they must be interpreted at puberty and thereafter. The entire teaching must be characterized by frankness and honesty. The amount of time now given to the question of alcohol would

be spent to far greater advantage were part of it given to the demonstration of the development of plants and animals in accordance with the biological principles involved. Only with trained teachers and adequate text-books will this become possible, and then probably only in the highest grade or in the secondary schools.

And so I am harking back to the home and to the parents. Honesty and frankness, courage and conviction, and the goal of instruction is attainable. The purpose of such teaching in the home is to establish an intellectual morality, not founded upon fear but upon correct conception as to the relations of the sexes and the necessity of personal purity for the advancement of the human race.

Many will promptly say knowledge will not bring about all this. Possibly not, but it is worth a trial. At least parents will be in a position to say that they have at least attempted to help their children develop along the proper lines that make for sex purity. If along with the training in the homes the social causes that go to make the great temptation are gradually obliterated, I am optimist enough to believe that the physical, mental, and moral havoc that now besets us on all sides will be very largely eliminated. Ignorance of the sex responsibilities and the dangers to the community that have resulted must be eradicated.

As a result of an experience covering several years in the actual work of giving instruction in sex problems to classes of the so-called tenement-house mothers of various nationalities, to mothers and fathers of children in the schools of New York, to social workers, to classes of boys in groups varying in age from nine to twenty-one, to school teachers, my plan for instruction has been evolved along practical lines.

For the purpose of convenience I have set three age periods for which different types of sex instruction must be given in order to secure the best results. First comes the age of mythology; second, the age of chivalry; third, the age of civic awakening. Beginning with the child at its earliest age, a plan of sex education may be followed that will result in the maintenance of the confidences of the child and the inculcation of the sex ideals that can be best established through rational sex instruction continuing over the entire life of the child.

The age of mythology constitutes that period of child life that is particularly keen in imagination. It represents the period when the witch and the fairy, Hansel and Gretel, or the giant and the dwarf, the goblins and the elves make the little eyes grow big with astonishment and wonder. Raggylug and all the animal creations are living in the child's domain. The child world is peopled with strange creatures that are most real. Mentally the fairy tale, the romance, the animal story, and Nature wonders supply the best intellectual pabulum. It is the wonder age and question follows question in the pursuit of information. At this time the child is first asking the parent for light as to the differences between boys and girls, where does the baby come from and at the same time is prattling about the mother cat and the baby cats or the kittens. The main factor necessary for sex instruction at this age is the determination of the parent to answer honestly every question that is asked by the child for at this age the child has all to learn. Giving vague or evasive answers only puts off the hour of combat. A correct start having been made there will never again be any hesitation or embarrassment on the part of the parent—the child will not feel confused or embarrassed unless the parent creates such a state of mind through a discipline that makes the child self-conscious. The second necessity is the possession of some fundamental facts that may be interpreted to the child through the medium of story or imaginative tale. The child easily learns the relation between baby and mother. The mother dog and the father dog, the cow and the calf, the horse and the mare and the foal, the lion, the lioness and the cub, the relation of the father, mother and baby soon come to be distinct concepts of the child. The second idea that is readily absorbed is the egg, and the chick that comes therefrom and the mother hen that laid the egg. The dependence of life upon the egg seems a large problem for the child to solve, but the youngsters grasp it easily. The third step to be taken is to show the sex organization of plants. The planting of a little oats or grass seed will serve for the lesson. The little green shoots are called the baby oats and the idea of the baby plant coming from a seed is implanted upon the fertile child mind. It is but a short step to show the child the mother plant whence came the seed. The identity of the seed and the egg as the

source of life, once appreciated there is a well established foundation for teaching the origin of human life. To go a step further, one can teach the child about the boys and girls that live together within the walls made of petals. The masculine nature of the stamens and the essential femininity of the pistils can be easily explained in terms of plays and games that the child knows. Modes of transference of the pollen and the fertilization of the seed that may be shown always to be in the female part of the flower lays an excellent foundation for the expansion of the sexual themes through the years to come. It must not be imagined that this brief suggestion is to be the work of a day. It must not be forced but should grow day by day and merely for the purpose of enlightening the child without creating any morbid feelings or craving for unnatural knowledge.

Gradually the child outgrows the age of mythology and enters the age of chivalry. There is no sharp line of demarcation of the two periods nor can any age be given when the transition occurs. The age of chivalry is really a prepubertal period. The child's body is beginning to take on new growth, the sexual functions are beginning to expand, the emotional side is unfolding at a very rapid pace. It is the glorious age of self-appreciation and a time when the child has the largest impulses for getting out to help in the work of the world but can merely dream. The actual expression of the sexual development may be marked by the intensification of affection for the family. Mother, sister and brother are terms that take on a fuller meaning. It is the time that the boy thinks that he really is a man when his mother asks him to take her around the corner at seven o'clock in the evening as her protector. He is a sort of hero seeking worlds to conquer. The blood begins to surge through his head at the reference to one of his feminine schoolmates. The society of girls is desired and their company is sought and the party days are at hand with their dangerous periods of amorous games. The girls are blossoming out into rounded form and their thoughts too are expanding. This is the time of "the lady bountiful." The desire to become a trained nurse, to enter a nunnery, to found an institution for the salvation of unregenerate felines or to be possessed of untold wealth for the betterment of mankind fills the day with joy. It is the age of the romantic walk and the day of looking with rapturous glances at

the handsome features of the matinee idol, whose face graces the chiffoniers. It is the time when competition in the battle for favors manifests itself and the parent is accused of not understanding the child's feelings or even life. It is the day of the most dangerous gang life for boys and girls. The desire for independence, the recognition of sex class feeling, the old reticence on the part of the parents to talk on the problems of puberty makes the source of information outside of the home. By a system of graduated instruction this period of chivalry has no terrors for the parent. Conversation is frank and confidence is retained and the child is protected from the most malicious influences that are surrounding it at this time of life. The emotional characteristics of the individual child are watched and guided through the mazes of conflicting sensations that attack the child at puberty. The knowledge of plants and animals that has been acquired through observation or by school teaching is all of use in explaining the natural functional phenomena that slowly transform the more or less sexless child into a creature that is sex conscious and views himself as the parents' equal. No attempt has been made to develop a sexual and sensual child. The light that is shed upon the sex problems in the home banishes the foulness of mind that is engendered by the looseness and lack of intelligent handling of the questions at the present time. A strong appeal can be made upon the chivalric side of child nature. The child can well be made to understand pride in family and self-respect as factors that are to be considered in the daily conduct of one sex toward the opposite sex. The necessity of personal cleanliness, the healthfulness of exercise and outdoor sports must be accentuated. The pernicious influence of smutty stories, lascivious literature, immodest attire, vulgar dancing demand especial attention without laying any stress upon the subjects so as to give them undue prominence as factors in the child's life. Great caution is required so as to avoid the serious danger of arousing morbid desires or stimulating latent feelings that have not yet forced themselves upon consciousness.

The period of civic awakening in turn marks a further development of character. The child in beginning adolescence appreciates that it is part of a community. The thoughts of future marriage already occupy a share of the mental horizon. The

understanding of the relation of the individual to the community or the state is slowly coming to play a part in the individual's life. The desire to vote, to have a home of one's own, to take a place in the affairs of the world marks the arrival of the child to a plane of emotions that will enable a parent to make an appeal to the altruistic sentiments. The relation of personal purity to the welfare of the state, the dangers of venereal disease, not to the erring youth but to the innocent community or individual as the future wife or children or friends makes a strong impression upon the adolescent. The information that has been given during the previous years of life are recapitulated and again interpreted in terms of duty to the state and responsibility to the community. It is a striking thought to an adolescent to realize that he has a responsibility for the health and welfare of the community and that his personal life has bound up in it the life and health and happiness of many other persons. The argument makes an appeal to the highest motives and the best thought of the adolescent and tends to serve as a keystone to the arched will that has been in course of development throughout the life of the individual.

This program of instruction is personal and established through personal parental instruction. Books are not of much value during the early years of life and often, if given to the children during the age of chivalry do considerable harm because they awaken thoughts for which the child is not prepared. Some of the books are distinctly morbid and tend to give children false impressions that are confusing in the light of their lack of experience with actual sex life. Books may even create a desire for personal experiences that are fraught with danger. Special books in the hands of parents are most valuable for purposes of adequate instruction.

Sex instruction should be undertaken by every conscientious parent. Knowledge is power for good or for evil. The use to which sex knowledge is to be put depends upon the development of the will of the child so that upon the basis of correct instruction as to sex physiology, psychology and purpose it may know evil and right and elect to live voluntarily and gladly a life that will be no menace to himself, his parents, his family or the community of which, as a child, he is such an essential part.

THE RELATION OF THE OBSTETRICIAN TO A PROGRAM OF SEX EDUCATION.

Read at the Twelfth New York State Conference of Charities and Correction, held at Watertown, October 17, 18 and 19, 1911.

By PAUL T. HARPER, Ph. B., M. D.,
Albany, N. Y.

The obstetrician bears a peculiarly intimate relation to the prospective parent for a valuable period before confinement and until the expiration of the lying-in period of four, six or eight weeks. In increasing numbers patients are consulting the obstetrician during the first half of pregnancy and it may be presumed that his period of observation before labor will be prolonged rather than shortened. On the other hand, the restrictions of specialized medicine may be expected to place a more or less definite time limit upon the duration of his services after delivery. It is to the prospective parent, therefore, that the obstetrician is especially qualified to appeal.

Enthusiastic support has already been accorded a program of sex education and there can be no question as to the outcome of a movement the purpose of which is to make the child of to-morrow a more intelligent, hence a better, father or mother a generation hence, and the details of which appear practical in application and wholly adequate to the end in view.

It is apparent that no single influence is as essential to rapid advancement in sex education as active co-operation on the part of the parent and that no greater impediment can arise than parental antagonism based upon reasons essentially sentimental or upon indifference from reasons no more valid. None the less important that the co-operation be active is it that it be intelligent.

Firm in the belief that the average adult is grossly ignorant of the essentials of the anatomy, physiology and mechanism of reproduction, education of the parent is urged as an initial step in the progress of education in matters of sex. Admitting the need of instruction of the parent and the peculiar opportunity for imparting the desired knowledge that is afforded the obstetrician, there is apparent an unusual service the latter can and will gladly render in furthering the program of education with which we are concerned.

In matters of sex, the ignorance even of the so-called well-educated woman of to-day is startling. The term is used advisedly and the fact appreciated by none more than by the obstetrician if he attempt to explain, in the simplest way, the principles of generation. For instance, such terms as 'cervix' and 'pelvis' as frequently need qualification when mentioned to the college-bred woman as when addressed to the dispensary patient. Illustrations are without limit and the assertion doubtless will be accepted without challenge.

In spite of her lack of definite knowledge of the phenomena of reproduction, some information the woman will have. She obtains it in response to an inborn impulse; for is the child's question as to the purpose of the bull in the herd an exceptional one and is he satisfied to be told the doctor brings with him the new baby or does he further inquire where he brings it from? The child may be expected to learn early; his information being as readily incorrect or inexact or vicious as the opposites, the quantity depending upon his inquisitiveness.

In young adult life, the so-called proprieties have prohibited discussion of the subject of sex. Her studies of the natural sciences may have taught the young woman much of all life but her own and too often she approaches marriage and motherhood with her knowledge of herself child-like in its simplicity.

She generally appreciates her deficiency and but little less often looks for help to well-meaning but too often to no better informed members of her sex: or, from patent medicine literature teeming with inaccuracies or worse, the so-called 'health journal.' or the well-advertised work on 'sex,' her information is obtained. Each aid sought is unfortunate; for the friend would help but cannot, too much of advertised medicine profits by her ignorance for us to expect it to treat her fairly, and too often she turns from the work on 'sex,' at best abounding in scientific inaccuracies and vague generalities, as she finds it something in part at least she will not read. When the common sources of her information are considered, there is little wonder at her ignorance.

It is neither the purpose of the writer to outline a program of sex education to be applied to the parent nor is it his desire to claim originality for the suggestions he would make. Satisfied

that upon the subject of sex hygiene the expectant mother is as a rule in possession of few facts and many fallacies, the writer urges free discussion with her of at least the essentials of the anatomy, physiology and mechanism of reproduction in an effort to convince her of the extent to which the preservation and improvement of her health depend upon obedience to certain well-defined laws of nature by showing her the suffering and possible danger to life that may result from disobedience or ignorance of them. The co-operation of the expectant mother must be more intelligent and the conduct of the case more efficient as she more fully understands her condition.

What has been said of the needs of the prospective mother in the matter of sex education applies as well to the father and, while opportunities for discussion of the subject with him may be infrequent, it is nevertheless important that he be made as familiar as possible with what may be told her.

In the first place, the patient should know, at least, the gross anatomy of the generative tract and pelvis and be given an understanding of such physiological processes as menstruation, ovulation, impregnation and development of the ovum. Terms need not confuse and will be remembered if applied with care and only to essentials and if supplemented on occasion by diagrams or illustrations from books of reference; but, as in all instruction, the intelligence of the pupil will determine on one hand how much may be required to satisfy and on the other how little tends only to confuse.

The changes undergone by certain organs and the increased work put upon others as pregnancy advances are not difficult to describe. If the patient is led to look upon the growing embryo, in addition to acquiring all its nourishment from the mother, as imposing upon her body economy an increasing amount of work to eliminate its own waste products and if she is reminded that the lungs, skin, kidneys and the bowel are natural avenues of elimination of body waste, she is at once impressed with the importance to her of fresh air, cleanliness and exercise, and free action of kidneys and bowel and, perhaps unconsciously, soon finds herself carrying out well the essentials of the hygiene of pregnancy.

Knowledge of the principles of the mechanism of labor and

of the extent to which the process with advantage may be influenced and controlled by herself and by others will enable the patient to approach the ordeal more with assurance than with fear, will sustain her during the trying first stage of labor and make more certain the co-operation essential to a satisfactory termination of its second.

There are two facts that may well be mentioned at this point; at least among the middle and upper classes, the frequency of so-called normal labor is decreasing, but, on the other hand, as much can be said of the morbidity attending pregnancy and confinement.

Changed manner of living with less and less work of the home done by the wife, the associated tendency toward the 'high tension,' nervous life and possibly pregnancy at later ages than a generation ago are readily-found explanations for the prolonged and instrumental labors so common among the more favored classes. Longer and closer observation during pregnancy and increased skill in the management of labor may be expected to decrease still more the present-day morbidity until hemorrhage and elevation of temperature are but rarely and laceration but little more frequently heard of. Of these facts the patient should be made aware that she may not only fit herself as nearly as possible for the ordeal of labor but also demand that the care in keeping with the advance in the obstetric art be accorded her.

Of the abnormalities of the generative organs and of the causes of the complications of pregnancy, labor and the puerperium, the patient is in possession of few facts. To bring the patient, as a result of her own deduction, to an appreciation of the extent to which many of these conditions are preventable, it is advisable that the essential causes of them be presented to her in the simplest yet most forceful manner possible. The following paragraphs illustrate the point the author would urge.

Developmental defects. The so-called 'developmental defects' of the generative tract are not uncommon if we may judge from the frequency with which the gynecologist is consulted for dysmenorrhoea before and sterility after marriage, where the persistence of the 'infantile type of uterus' is the only physical defect to be discovered. The abundance of the literature on the

medical and surgical treatment of these conditions further attests their frequency and bears with it a suggestion of unsatisfactory attempts at cure. Opinion differs as to the value of this or of that surgical or medical procedure as a means of relief and it will doubtless continue to do so; but it is agreed that the majority of sufferers are recruited from those who have either deliberately emphasized the social and the intellectual at the expense of the physical, or because of illness have been denied the latter, during the trying years at and just following puberty. The lesson is obvious if the young woman of to-morrow would be spared suffering that the woman of to-day finds little relief in medicine for.

Miscarriage. The real significance of miscarriage is but little understood by the laity and for no better reason than from a lack of appreciation of the rapidity with which the ovum develops after impregnation. Pictures of the foetus at the sixth week with features and extremities crudely formed and with sex possibility determined will dispel the ignorance that associates the advent of the living and developing foetus with the period of 'quickenings,' incidentally will remove the convenient barrier behind which those who seek the criminal abortionist too often hide in the 'belief' that 'there is no life (therefore no wrong done) until it is felt' and will do more than words to bring the patient to look upon every miscarriage as a premature confinement.

Relatively few facts of the physiology of the pregnant uterus then will suffice to explain the frequency of miscarriage during the early months and the relative infrequency though the greater danger of retention of portions of the ovum in the later months; to show that the dangers of full-term pregnancy (namely hemorrhage and infection) are increased, the former by the retention of fragments of the incompletely completed gestation and the latter by the possible operative measures employed to remove such fragments; and to demonstrate the manner in which a chronic endometritis, with the possibility of repeated miscarriage in subsequent pregnancies, may follow an attempt of the uterus to absorb or cast off its lining membrane that has been delicately elaborated to retain the ovum rather than to have the latter taken from it.

Toxaemias. The author would apply in a general way the term 'toxaemias' to a group of conditions the manifestations of which are persistent and increasing vomiting, swelling of feet and ankles and albuminuria or, possibly, convulsions. The prospective mother is as aware that some of the above-mentioned symptoms have persisted for a variable time causing the patient no more than inconvenience as she is that results disastrous to mother and to child have attended their presence though to a slight degree. The patient must appreciate that the borderline between the normal and the abnormal is narrow and, she may be assured by the physician, is as yet too indefinite; for, in spite of all investigation, the exact etiology of the so-called 'toxaemias' has yet to be determined although the accumulation of poisons of her own body economy and of that of the growing embryo is at least a promising predisposing cause.

All of which suggests the importance of affording easy escape for the body's waste products by keeping open the natural avenues of elimination and of minimizing the poisons added through food and water taken and air breathed; and emphasizes the necessity of observation at frequent intervals or whenever the patient feels 'things are not as they should be' if the physician, at an early date, would detect the onset of the abnormal.

Infection. The pregnant woman goes into labor with the vagina and uterus practically free from the presence of pathogenic (or harmful) micro organisms. As much can not be said of the patient's external genitals, of the covering about her, of the instruments the physician may use nor of the hands with which he may use them. All may abound in such organisms and must be considered possible sources of infection.

Infection or 'blood-poisoning' at delivery, with but the rarest exceptions, is caused by the presence and multiplication of harmful micro-organisms within the birth-canal that nature has rendered surgically clean; and the obstetrician is coming to look upon most elevations of temperature during and especially following labor as presumptive evidence of such infection, the common sources of which have been mentioned above.

Consideration of the foregoing facts should convince the patient that infection is a highly preventable complication of labor and the puerperium and is most effectually guarded against by cleanliness of person, by infrequent careful vaginal ex-

aminations, by the elimination of douches and intercourse immediately before and too soon following delivery and by the maintenance of surgical cleanliness throughout and for several days following labor.

Much that has been said of infection of the birth-canal is especially applicable to infection of the breast. Inflammation of the lactating breast is caused practically never by bacteria the patient herself harbors but is the direct result of contamination by clothing, by hands and even by the lips of the nursing baby. The 'gathered breast' therefore must be considered the consequence of an infection conveyed through healthy nipples that could have kept clean or through cracks and fissures in them that could have healed; and it is preceded, in the majority of cases, by an engorgement or so-called 'cake' that could doubtless have been reduced.

It is not claimed for the foregoing paragraphs that they have dealt either formally or completely with the complications of pregnancy, labor and the puerperium: indeed, many other and perhaps more important ones will at once be suggested to the physician. They are written in the belief that such practical discussions offer the surest means of bringing the patient to realize the extent to which her health is in her own keeping and are of immeasurable value in advancing a program of education that is to acquaint man with himself.

The writer has attempted to show the opportunities for unusual service in the advancement of a program of sex education privileged relationship with the prospective parent affords. The fact that such intimacy is shared not alone by the obstetrician and by the general practitioner but almost equally with one who is acknowledged, in every way, unfitted to do the work she attempts, suggests both the proportions the practice of the midwife has assumed and the seriousness of a situation that must be speedily and adequately met.

To a discussion of some of the phases of the problem of the midwife the following paragraphs are devoted.

Conservative estimate places the percentage of labors attended by the midwife at thirty-five. She practices not alone among the alien and negro population as may commonly be supposed but is employed extensively by the poor of the native-born popu-

lation. She is with the rarest exceptions ignorant, is without theoretical and with little practical preliminary training, practices by means of a license readily obtained and practically never revoked and, except in some parts of the country, is without State or municipal control. Little good that could not be done by one more capable and much harm, therefore, are to be expected of her.

The high percentage of still-births in her practice we know of; a few of her complicated cases are seen in time by the physician but more escape him until too late; the extent to which her practice of criminal abortion is carried cannot be accurately determined but is known to be great and as much can be said of the morbidity that must attend her cases from infection of the eyes of the new-born, from subinvolution of the uterus, hemorrhage, retention of secundines, laceration and similar preventable conditions. The magnitude of the problem confronting us is apparent.

Reasons for the extent of the midwife's practice are not difficult to find. The alien is accustomed to her services and may be expected to call upon her from habit; though it must be appreciated that the midwife of most of the continental countries has been trained, commonly for a period of one or two years, licensed by the state, and is qualified to attend normal labor and trained to appreciate to some extent her limitations. The alien knows little of the inferiority of the midwife he finds in our midst and, as is probable, cares less for her services as he sees them are satisfactory. If they were not it is to be assumed that he would not continue to seek them; and as much doubtless could be said of others who employ her.

It is not difficult to find two adequate reasons for this satisfaction. The writer would emphasize them in the belief that the problem of the midwife is most satisfactorily solved as it is attacked from the point of view of him who employs her.

In the first place, there are few stronger arguments than one that appeals to the purse; and the midwife's charge for her services is low, ridiculously so when we consider she attempts the duties of physician, nurse and, doubtless, often of the house-keeper. It is not to the point to urge that much apparent economy at the time is costly in the end for many of her patients.

In the second place, the midwife's services are satisfactory because they seem efficient. Her patients expect that certain mothers are to have fever and breasts that 'gather,' are to suffer from hemorrhage and possibly from 'dropsy' and convulsions, and become semi-invalids after two or three pregnancies. In other words, they are not concerned over the abnormal and diseased conditions, the so-called obstetrical morbidity, that medical science is striving so successfully to prevent; and are content when the mother escapes with her life. With even less they seem satisfied when the child is considered for they are familiar with the still-birth and are not at all disturbed over the frequency of this condition in midwife practice.

The midwife herself commonly knows no better and may even feel satisfaction that her mothers recover; for she practices among a class whose labors commonly are normal, who expect pain and bear it well and who seem unusually protected by some natural defense against the great danger of infection, and her results are by no means all unhappy ones.

Our problem, therefore, is to supply with better obstetrical service those who in the past have expected little and have been satisfied when no more has been given: it concerns essentially the midwife and the individual who employs her.

The former must be trained, her activities regulated and controlled or she must be eliminated. The value of the training she may doubtless soon be able to secure in the schools for midwives (one of which has already been established) and the efficiency of a license which legislative enactment may empower a central board to issue and as well to revoke in correcting many of the abuses of midwife practice are apparent. Her elimination at once is acknowledged impossible.

The employer must be taught to demand more skilled service. Could such demand be created at once, the problem would in time solve itself for the desired service would be supplied; whether by midwife, general practitioner or by obstetrician is immaterial. Could the demand be urged with the assurance that better service would be supplied at less or at no added expense to the employer, it would seem that the essential obstacle to the solution of the problem had been overcome.

To create the demand, the author would suggest the im-

measurable value of extension of education along the lines that have been suggested.

To supply the demand freely and with a minimum of expense, he would urge the creation of facilities for out-patient obstetrical service among the poor where such advantages are not found and their utilization to the fullest extent in communities where they already prevail.

In no other department of practice has the dispensary, the out-patient department or 'district nursing,' under the direction of skilled physicians, failed to meet the problem of adequate medical service to the poor. There is no valid reason why it should fail in this particular.

The foregoing facts are offered in the belief that the problem of better obstetrical service for the poor can and will be solved, if necessary with but probably without the services of one who is at best a relic of the less progressive past and who renders no service that the physician cannot and will not perform; and they are presented with the hope that they may prove of practical value to that end.

Correspondence

THE THERAPEUTICS OF ESQUIROL.

To the Editor:

May I be allowed to make a correction on the very interesting letter of Esquirol, which appeared in the March issue of the ANNALS.

I note in quotation the word "sange." This should read *sauge*, in English sage. This plant is officinale and was much used on the Continent in the early part of the nineteenth century.

Very truly yours,

CHARLES G. CUMSTON, M. D.

Boston, March 9, 1912.

PORTRAITS WANTED.

Back in the last half of the 17th century there came to Albany a man of brilliant attainments, William McClellan. He was a Scotchman and had been educated in Edinburgh; imme-

dately after which he came to this country and began his professional career here at Albany. Scotland has sent other of her medically trained men here, and in those early times they were specially needed, for doctors in this country who had anything but a casual education were not numerous. Dr. McClellan, with his early advantages, was the best educated physician in the city and for twenty years he had a large practice. He was active in the interests of his profession and was one of the founders of the Albany County Medical Society, in 1806; of the thirteen men joined with him only six seem to have had a medical degree, although several were college graduates. The State Medical Society was founded the year following by delegates from the counties; Dr. McClellan was elected from Albany and he was made the first President of that organization. Dr. William Bay, whom old residents of Albany will recall the name of, came to the city in 1811 and formed a partnership with him, ended a year later by the death of Dr. McClellan at the early age of 43. He was a deservedly eminent man in this city.

Jonathan Eights was a son of a prominent citizen of Albany whose ancestors came here from Holland; he studied medicine and became an influential member of the profession here, in which he served for more than fifty years during the first half of the last century. He was for two years the President of the State Medical Society. One of his inaugural addresses was on the subject of Vaccination and is an admirable presentation of the subject, of which he was an enthusiastic advocate.

Joel A. Wing, of New England descent, had an extensive practice in medicine here for forty years, much of the time a contemporary of Dr. Eights. He was connected with the army of the war of 1812, and his son became an officer of the U. S. Navy. Among his other professional honors was that of President of the State Medical Society.

The State Medical Society is collecting portraits of those who have been its Presidents. Those of these three men of this locality are lacking. If any one who sees this can give a clue whereby they may be attained they will confer a favor on the Society and help to place them in a place of permanent record. The Society ought not to miss them from its collection.

Editorial

"There, sir," cries Benjamin; "now I will, if you please, resume my former self; but a man is obliged to keep up some dignity in his countenance whilst he is performing these operations, or the world will not submit to be handled by him. You can't imagine, sir, of how much consequence a grave aspect is to a grave character. A barber may make you laugh, but a surgeon ought rather to make you cry."

The History of Tom Jones.

HENRY FIELDING.



Medical Society of the State of New York. The 106th Annual Meeting of the Medical Society of the State of New York, to be held in Albany in April, promises to be the most active and successful convocation of the Society ever held. Dr. Wendell C. Phillips, the President, has taken the initiative, and with the able assistance of his associates and heads of committees, has prepared a comprehensive and representative program. He has succeeded for the first time in developing the idea of "sections," and the different departments of medicine will be represented in different places throughout the city.

General meetings of the Society, open to the public, will be addressed by Dr. Harvey W. Wiley, who will give the Annual Oration on Medicine upon the "Relation of Exact Science to Medicine." The other general meetings will be addressed by Dr. George E. de Schweinitz upon the "Prevention of Blindness and the Instruction of the Blind Child," by Dr. G. Hudson Makuen upon the "Prevention of Deafness and the Instruction of the Deaf Child," by Dr. Albert Warren Ferris upon the "Prevention of Insanity," and by Mr. Homer Folks upon the "Prevention of Tuberculosis." Another important contribution of public interest will be that by Dr. Walter B. Cannon upon "The Benefits of Vivisection to Mankind."

The program of the different sections on Medicine, Surgery, Diseases of the Eye, Ear, Nose and Throat, Mental and Nervous Diseases, and Public Health and Preventive Medicine is a very large one, and leaders in each specialty are prominent in the list of papers to be presented.

The programs have been printed in full in the February and March issues of the *New York State Journal of Medicine*, and will surely attract to Albany a representative gathering of physicians of the State. It is also announced that membership in this Society is not a requisite for attendance at the meetings, and medical men are generally invited.

The President of the Society and his colleagues are to be congratulated upon the foreordained success of this elaborate meeting. This will justify steps taken toward the rehabilitation of the State Society, which in late years has not been altogether a representative or aggressive organization.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, FEBRUARY, 1912.

Deaths.

Consumption	21
Typhoid fever	2
Scarlet fever	0
Measles	0
Whooping-cough	1
Diphtheria and croup	4
Grippe	5
Diarrheal diseases	7
Pneumonia	19
Broncho-pneumonia	4
Bright's disease	12
Apoplexy	7
Cancer	12
Accidents and violence	6
Deaths, over 70 years	45
Deaths, under 1 year	14
 Total deaths	 183
Death rate	23.02
Death rate less non-residents	20.00

	<i>Deaths in Institutions.</i>	Resident.	Non-Resident.
Albany Hospital	II	13	
Albany Orphan Asylum	0	0	
Child's Hospital	I	0	
Albany County Jail.....	0	0	
County House	2	0	
Homeopathic Hospital	8	3	
Hospital for Incurables	I	I	
House of Good Shepherd	0	I	
Little Sisters of the Poor.....	2	I	
Public places	I	2	
Penitentiary	0	0	
St. Frances de Sales Orphan Asylum.....	0	0	
St. Margaret's House	2	I	
St. Peter's Hospital	10	I	
Austin Maternity Hospital	0	0	
Albany Hospital, Tuberculosis Pavilion	I	0	
Confederation of Labor	I	0	
		40	23
Births			202
Still births			5

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

In the Bureau of Plumbing, Drainage and Ventilation there were one hundred eighty-eight inspections made, of which forty-eight were of old houses and one hundred forty of new houses. There were forty-five iron drains laid, six connections to street sewers, seven tile drains, forty-six cesspools, eighty-six wash basins, seventy-seven sinks, sixty-seven bath tubs, fifty washtubs, ninety-four tank closets, four slop hoppers, and two shower baths. There were ninety-four permits issued, of which seventy-seven were for plumbing and seventeen for building purposes. Fifteen plans were submitted, of which seven were of old buildings and eight of new buildings. Forty-six houses were tested, two with blue or red, four with peppermint and there were forty water tests. Twenty-nine houses were examined on complaint and forty-six were re-examined. Eighteen complaints were found to be valid and eleven without cause.

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	7
Scarlet fever	3
Diphtheria and croup	43
Chickenpox	1
Measles	3
Whooping-cough	0
Consumption	30
Total	87

Contagious Disease in Relation to Public Schools.

	<i>Reported</i>	<i>D.</i>	<i>S. F.</i>	<i>Deaths</i>	<i>D.</i>	<i>S. F.</i>
Public School No. 5.....		I	..	..	..	..
Public School No. 11.....		I	..	..	..	..
Public School No. 20.....		19	..	I	..	..
Public School No. 21.....		..	I	..	..	..
High School .....		..	I	..	..	..
Holy Cross School		2	..	..	..	..
Cathedral School		I	..	..	..	..
Number of days quarantine for diphtheria:						
Longest.....	35	Shortest.....	4	Average.....	14	16 17

Number of days quarantine for scarlet fever:

Longest.....	40	Shortest.....	13	Average.....	30
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Fumigations:

Houses.....	50	Rooms	255
Cases of diphtheria reported.....			43
Cases of diphtheria in which antitoxin was used.....			43
Cases of diphtheria in which antitoxin was not used.....			0
Deaths after use of antitoxin.....			4

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	II
Negative	14
Failed	0
Total	25

TUBERCULOSIS.

Living cases on record February 1, 1912.....	349
Cases reported during February:	

By card	21
Dead cases by certificate	10
	—

31

380

Dead cases previously reported.....	II
Dead cases not previously reported.....	10
Duplicates	I
Recovered	2
Removed	I
Unaccounted for	0
	—

25

Living cases on record March 1, 1912.....	355
Total tuberculosis death certificates filed during February.....	21
Out of town cases dying in Albany:	
Albany Hospital	3

18

PUBLIC HEALTH

BUREAU OF PATHOLOGY.
Bender Laboratory Report on Diphtheria.

Initial positive	39
Initial negative	194
Release positive	37
Release negative	46
Failed	34
<hr/>	
Total	350
Test of sputum for tuberculosis:	
Initial positive	19
Initial negative	25
Failed	5
<hr/>	
Total	49

BUREAU OF MARKETS AND MILK.

Market reinspections	117
Public market inspections	22
Fish market inspections	2
Fish peddler inspections	2
Pork packing house inspections.	1
Rendering establishment inspections.	1
Slaughter house inspections	4
Hide house inspections	3
Milk inspections	27
Butter fats below 3%	0
Butter fats from 3 to 3.5%	7
Butter fats from 3.5 to 4%	18
Butter fats over 4%	2
Solids under 12%	7
Solids from 12 to 12.5%	2
Solids from 12.5 to 13%	8
Solids over 13%	10

BUREAU OF MILK.

No.	Specific Gravity.	BUTTER FATS.				SOLIDS.				Over 13%
		Under Per Cent.	3 to 3.5%	3.5 to 4%	Over 4%	Under 12%	12 to 12.5%	12.5 to 13%		
9.....	29.6	..	I	..	..	I	..	..	..
31.....	30.4	..	..	I	..	..	I	..	..
75.....	30.4	..	I	..	..	I	..	..	..
147.....	32.6	..	I	..	..	I	..	..	..
169.....	29.4	..	I	..	..	I	..	..	..
190.....	30.6	..	I	..	..	I	..	..	..
357.....	31.6	..	I	..	..	I	..	..	..
168.....	30.4	..	..	I	..	..	I	..	..

8.....	31.4	..	..	I	..	..	..	I	..
11.....	31.4	..	..	I	..	..	..	I	..
22.....	31.8	..	..	..	I	..	..	..	I
23.....	32.4	..	..	I	..	..	..	..	I
32.....	31.4	..	..	I	..	..	..	I	..
36.....	33.3	..	..	I	..	..	..	..	I
78.....	32.6	..	..	I	..	..	..	..	I
88.....	31.2	..	I	..	..	I	..	..	..
117.....	32.3	..	..	I	..	..	..	I	..
148.....	32.8	..	..	I	..	..	..	..	I
162.....	32.6	..	..	I	..	..	..	..	I
171.....	32.6	..	..	I	..	..	..	..	I
172.....	32.6	..	..	I	..	..	..	..	I
195.....	31.2	..	..	I	..	..	..	..	I
336.....	30.8	..	..	..	I	..	..	I	..
47.....	31.2	..	..	I	..	..	..	I	..
68.....	32.2	..	..	I	..	..	..	I	..
127.....	33.2	..	..	I	..	..	..	..	I
170.....	32.2	..	..	I	..	..	..	I	..

MISCELLANEOUS.

Mercantile certificates issued to children.....	16
Factory certificates issued to children.....	9
Children's birth records on file.....	25
Number of written complaints of nuisances.....	40
Privy vaults	5
Closets	9
Plumbing	10
Other miscellaneous complaints	16
Cases assigned to health physicians.....	81
Calls made	201

Medical News**Edited by Arthur J. Bedell, M. D.**

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR FEBRUARY, 1912.—Number of new cases, 184; classified as follows: Dispensary cases receiving home care, 1; district cases reported by health physicians, 4; charity cases reported by other physicians, 48; moderate income patients, 107; metropolitan patients, 24; old cases still under treatment, 113; total number of cases under nursing care during month, 297. Classification of diseases for the new cases: Medical, 43; surgical, 12, gynecological, 4; obstetrical under professional care, mothers 62, infants 59; infectious diseases in the medical list, 4. Disposition: Removed to hospitals, 7; deaths, 9; discharged cured, 156; improved, 21; unimproved, 11; number of patients still remaining under care, 93.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 6; nurses in attendance, 4; patients carried over from last month, 6; new patients during month, 6; patients discharged, 11; visits by head obstetrician, 0; visits by attending obstetrician, 0; visits by students, 96; visits by nurses, 109; total number of visits for this department, 205.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,393; for professional supervision of convalescents, 164; total number of visits, 1,557; cases reported to the Guild by four health physicians and forty-seven other physicians; graduate nurses 9, and pupil nurses 6 on duty.

Dispensary Report.—Number of clinics held, 90; new patients, 118; old patients, 397; total number of patients treated during month, 515. Classification of clinics held: Surgical, 12; nose and throat, 7; eye and ear, 16; skin and genito-urinary, 8; medical, 11; lung, 11; dental, 0; nervous, 1; stomach, 4; children, 12; gynecological, 8.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The regular annual meeting of the Medical Society of the State of New York will be held April 16, 17 and 18, 1912, at 10.30 A. M., in the City Hall (Common Council Chamber), Albany, N. Y.

Tuesday, April 16th, 10.30 A. M.—City Hall, Common Council Chamber. 106th Annual Meeting of the Medical Society of the State of New York.

11.00 A. M.—Emmanuel Baptist Church. General meeting, open to the public. Invocation by the Rev. Alexander H. Abbott, Pastor Emmanuel Baptist Church. Opening remarks by the President, Wendell C. Phillips, M. D., New York City. Address of welcome by Hon. John A. Dix, Governor of the State of New York. Address of welcome by Hon. James B. McEwan, Mayor of Albany. Greetings from the American Medical Association, Abraham Jacobi, M. D., President-elect, New York City. Annual Oration on Medicine, "Relation of Exact Science to Medicine," Harvey W. Wiley, M. D., Chemist and Chief, Bureau of Chemistry, Department of Agriculture, Washington, D. C., by invitation.

1 P. M.—Subscription luncheon (50 cents), German Hall.

2.30 P. M.—Meeting of Five Sections: Section on Medicine, City Hall, Common Council Chamber. Section on Surgery, City Hall, Supervisors' Room. Section on Diseases of Eye, Ear, Nose and Throat, Albany Medical College. Section on Mental and Nervous Diseases, Eugenics and Medical Expert Testimony, Historical and Art Society Rooms. Section on Public Health and Preventive Medicine, Emmanuel Baptist Church.

8.30 P. M.—State Capitol, Assembly Chamber. General meeting, open to the public. Addresses on "Prevention of Deafness and the Instruction of the Deaf Child," G. Hudson Makuen, M. D., Philadelphia, Pa., by invitation; "Prevention of Insanity," Albert Warren Ferris, M. D., Watkins, N. Y.; "The Present Status of the Movement for the Prevention of Tuberculosis in this State," Homer Folks, Esq., State Charities Aid Asso-

ciation, New York, by invitation; "Prevention of Blindness and the Instruction of the Blind Child," George E. de Schweinitz, M. D., Philadelphia, Pa., by invitation.

Wednesday, April 17th, 9 A. M.—Meeting of Sections.

2 p. m.—General meeting, Emmanuel Baptist Church. Annual Oration on Surgery, "The Duty of the Family Physician in the Management of Surgical Cases," John M. T. Finney, M. D., Associate Professor of Surgery, Johns Hopkins University, Baltimore, Md., by invitation.

3 p. m.—Meeting of Sections. Joint session, Sections on Medicine and Eye, Ear, Nose and Throat. City Hall, Common Council Chamber. Symposium on Vertigo. See Programs of Sections on Medicine and Eye, Ear, Nose and Throat.

8 p. m.—State Capitol, Assembly Chamber. General meeting. Open to the public. Oration, "The Benefits of Vivisection to Mankind," Walter B. Cannon, M. D., Professor of Physiology, Harvard Medical School, Boston, Mass., by invitation.

9 p. m.—Reception to the President. Entertainment, dancing and supper, Hotel Ten Eyck. Tickets, including supper, \$2.

Thursday, April 18th, 9.30 A. M.—Meeting of Sections. Joint session, Sections on Medicine and Surgery. City Hall, Common Council Chamber. Symposium on Poliomyelitis (Infantile Paralysis). Symposium on Hyperthyroidea. See Programs of Section on Medicine and Surgery.

2 p. m.—Meeting of Sections.

STATE HOSPITALS FOR THE INSANE OVERCROWDED.—According to the annual report of the State Commission in Lunacy, there are 33,311 patients in the institutions for the insane in this State. Of these, 31,051 are in the hospitals of the State. The number of deaths among these for the year 1911 was 2,885, which is a slight increase over the death rate of the previous year. There was also a slight increase in the number who recovered over the total of 1910. The disbursements amounted to \$7,931,966, while the sum collected from paying patients was \$400,525. The commission urges the speedy development of the Mohansic State Hospital and the Creedmore Branch of the Long Island State Hospital and the extension of the lease of Ward's Island to fifty years.

NEW YORK SKIN AND CANCER HOSPITAL.—The governors of the New York Skin and Cancer Hospital announce a course of lectures to be given in the out-patient hall of the hospital, Wednesday afternoons at 4.15. "Diet and Hygiene in Diseases of the Skin," Dr. Bulkley, April 3d, 10th and 17th. "Some Recent Methods of Treatment for Malignant Diseases," Dr. Bainbridge, April 24th. Each lecture will be preceded by a half hour clinical demonstration of various cases.

COMMITTEE ON PREVENTION OF BLINDNESS.—The third annual report of the Committee on Prevention of Blindness of the New York Association for the Blind by the secretary, Miss Van Blarcom, is unusually comprehensive, and deals with the more common causes of blindness under the

following subdivisions: Ophthalmia neonatorum; Trachoma; Preservation of Sight of School Children; Illumination; Eyestrain; Wood Alcohol; Industrial Accidents; Legislation; Education and Co-operation.

The work done by this committee is evidenced in this report and should be carefully read by all who are interested in the subject.

The purpose of the committee during the coming year is to continue its study of the occurrence and result of ophthalmia neonatorum, to assist in securing the enforcement of the law requiring this disease to be reported and to work toward state-wide hospital provision for the care of ophthalmia neonatorum cases; to continue its work toward securing the recognition, training, registration, supervision and control of midwives practicing in New York State; to continue its study of unnecessary blindness and visual impairment resulting from trachoma, wood alcohol, industrial accidents and inadequate lighting, and to take such measures as lie in its power to aid in eliminating such cases.

HONORARY HEALTH COMMITTEE.—Governor Dix has appointed an honorary committee of five members to represent the State of New York and co-operate with a national committee on organization to plan and prepare an exhibition to illustrate the recent progress of the public health movement in continental America and the dependencies of the United States. The exhibition is to be held in connection with the Fifteenth International Congress on Hygiene and Demography to be held in Washington, D. C., on September 23-28 of the present year.

The members of the committee appointed by Governor Dix are: Dr. Henry L. K. Shaw, Albany; Dr. Joseph D. Bryant, New York; Dr. Luther H. Gulick, New York; Edward T. Devine, New York; Dr. Eugene H. Porter, New York.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held at the County Court House on Tuesday, March 12, 1912, at 8.30 P. M.

Dr. Howard Fox, of New York, presented a paper on "Cutaneous Syphilis, treatment by Salvarsan," with a lantern demonstration.

PERSONALS.—Dr. CHARLES F. CLOW (A. M. C. '88), of Schenectady, is seriously ill and unable to practice.

—Dr. THOMAS SALMON (A. M. C. '99), has resigned his position as chairman of the New York Board of Alienists, to become the supervising head of the National Committee for Mental Hygiene.

—Dr. KENNETH D. BLACKFAN (A. M. C. '05), of Cambridge, N. Y., has been appointed resident physician in the New Children's Hospital, St. Louis. He will be directly under Dr. Howland, who was recently appointed in charge of the Department of Pediatrics, Washington University.

—Dr. PERCIVAL W. HARRIG (A. M. C. '06), has sailed for Europe to engage in post-graduate work.

DIED.—Dr. HAMILTON DEGRAW (A. M. C. '55), who after ten years of practice retired and became a banker at Brookfield, Mo., died at his home in that city, February 1, from senile debility, aged 95.

—Dr. SIDNEY FRANKLIN RODGERS (A. M. C. '82), died at his residence, 141 Main St., Cohoes, from uremic poisoning, aged 65. Dr. Rodgers practiced in Troy until 1897, during which time he served a term as coroner.

—Dr. CLINTON G. COOLEY (A. M. C. '84), of Montgomery, N. Y., died at the home of his brother near Pine Bush, N. Y., aged 56.

Current Medical Literature

LARYNGOLOGY

Edited by Clement F. Theisen, M. D.

Analgesia of the Larynx by Alcohol Injection of the Internal Branch of the Superior Laryngeal Nerve.

ALFRED LEWY. *Laryngoscope, January, 1911.*

A practical method for the relief of the atrocious pain in some cases of tuberculosis of the larynx has long been desired. The author, while acting as assistant in the clinic of Sturman of Berlin, suggested alcohol injections of the sensory nerve for this purpose and has used it. It does not seem to have attracted the attention in this country that it deserves.

The author reports two cases in which alcohol injections were used with excellent results.

R. P. Aged 35 years. Diagnosis, tuberculosis of the lungs and of the spine of several years' standing; infiltration of left arytenoid region, aryepiglottic fold and left half of epiglottis, at the inner lower surface of which was a group of tubercles of which the visible area was about one-fourth inch in diameter. The potassium iodide therapeutic test was without result. Since about seven months, patient has had pain in the left side of the throat which he has borne with fortitude until about a week ago, when it became very severe. Twelve minims of one per cent cocaine in seventy-five per cent alcohol, was injected into the internal branch of the left superior laryngeal nerve. After the usual pain, due to the injection ceased, the patient was free from pain and has remained so.

C. A. Aged 45. Excessive user of alcoholic liquors and tobacco for many years. Diagnosis, advanced tuberculosis of lungs; infiltration of epiglottis, aryepiglottic folds, ventricular bands and particularly of the interarytenoid region. No ulceration visible. Pain in the middle of the throat, radiating toward left ear. The pain, together with the mechanical obstruction offered by the swollen posterior wall of the larynx, almost prevented swallowing. Could take only a small sip of milk at a time; no solids. Twenty-five minims seventy-five per cent alcohol (without cocaine),

was injected into the internal branch of the left superior laryngeal nerve. After this patient was able to swallow without pain, coughs much less and sleeps better.

The injection is made directly through the skin of the neck. The technic is comparatively simple. From $\frac{1}{2}$ to 2 cc. of 75 per cent alcohol (with or without 1 per cent cocaine), warmed a little above body temperature, is injected at a sitting. The patient's head is inclined to the side opposite the one to be injected; the skin, previously shaven if necessary, is cleansed with alcohol; the operator's left hand grasps the larynx to steady it and hold it prominently under the skin of the side to be injected, in such a way that the thumb is on the injected side while the left index finger seeks the comparatively tender point where the internal branch of the superior laryngeal nerve penetrates the thyro-hyoid membrane, a point about half-way between the upper border of the thyroid cartilage and the hyoid bone, and about a centimeter in front of (mesially from) the superior cornu of the thyroid cartilage. The index finger is held firmly in place while the needle is inserted at the point marked by the center of the nail to a depth of 1 to $1\frac{1}{2}$ cm. perpendicularly to the surface. If the nerve has been accurately located this insertion will cause a pain radiating characteristically toward the ear. However, the injection may be made in this locality drop by drop (after the pain caused by the insertion subsides) until the original pain ceases or until the full amount (2 cc.) is used. The injection may be repeated next day if necessary.

In the author's cases there was no loss of the cough reflex or aspiration of food. An ordinary hypodermic syringe may be used but a special obturator needle is perhaps preferable.

The entire subject of laryngeal anaesthesia, its indications and benefits in tubercular conditions, with a complete bibliography, reports of five cases in which the above procedure was applied this year, and a description of his technic and that of Dr. Rudolf Hoffman, by Dr. O. Levinstein, of Berlin, appears in the *Arch. f. Laryngol.*, Bd. 23, Heft 2, 1910. Hoffman and Levinstein both use 85 per cent alcohol at 45°C., without cocaine.

Some failures will, of course, be encountered owing to the varying location of the branching of the nerve and to the pathologic alteration of anatomic relations.

Papillitis with Otogenous Complications.

E. RUTTIN. *Laryngoscope*, November, 1911.

There is scarcely a symptom of intra-cranial disease about which there is such a difference of opinion as to its diagnostic worth as there is about the changes in the fundus of the eye. While these changes were formerly considered so important a symptom that the otologist often made the question of an operation dependent upon the condition of the fundus

oculi alone, recently experiments which disprove the diagnostic worth of these changes in the fundus have increased more and more. Takabatake of Koerner's clinic, in particular, has taken this standpoint.

The author's investigations were carried out in conjunction with his brother, Dr. O. Ruttin, of Dimmer's eye clinic in Vienna.

Among twelve cerebellar abscesses, changes were found in the fundus of the eye in three cases, and in twenty-three cases of abscess in the temporal lobe, changes were found in the same number. Of ninety cases of sinus thrombosis, thirty cases were systematically examined every five to ten days.

Of the twenty-three abscesses in the temporal lobe, there were changes in the fundus of the eye in only three cases. Of these three patients, two died, and those two of meningitis. The third has recovered. In the two other cases it is not impossible that a thrombus of the superior petrosal sinus existed, for there were strikingly extreme changes in the border of the pyramid with extreme indurative changes of the dura in this region.

It would seem, then, at least judging from the author's material, that with otogenous abscesses in the temporal lobe, changes in the fundus of the eye are quite rare, and it cannot even be stated with certainty whether the pathological condition of the fundus oculi of many of the cases described in the literature, are not to be referred to the extradural changes rather than to the cranial abscess.

The author does not believe that it is these extradural changes that cause the papillitis. He would rather assume that in these cases there is a question of compression of the superior or inferior petrosal sinus or of both sinuses.

If we assume that the regurgitation from the superior and the inferior petrosal sinuses toward the cavernous sinus is the cause of the papillitis, then among all otogenous intra-cranial complications, sinus thrombosis in respect to the operative exclusion of the sinus-jugularis region should give the highest per cent of papillitis. This supposition also seems to be supported if systematic investigations are instituted. Of the author's thirty cases, eight had papillitis. Six of these cases developed papillitis only after jugular ligation and the removal of the sinus; in one case there had, unfortunately, been no examination of the eyes and in another case the papillitis had existed before the ligation. The period of its development varied from two days to a month after the operation. In a recently published work, Wagener has given us a series of cases of papillitis with intracranial complications and he attributes them all, including the cases with sinus thrombus, to serous meningitis. He holds the serous meningitis responsible for the development of papillitis. In four of the author's cases, serious meningitis may be absolutely excluded.

The author does not go into cases of meningitis in his paper because in these cases he never found papillitis, only neuritis.

It is also of interest that in one case of pronounced otogenous sepsis without sinus thrombus, in which only a sinus incision was made without ligation, a septic neuritis developed, but no papillitis.

History of a Case of Cerebellar Abscess Presenting Certain Features Suggestive of Labyrinthine Suppuration; Differential Points; Operation; Recovery.

PHILIP D. KERRISON. *Annals of Otology, Laryngology and Rhinology*, March, 1911.

The author reports the following interesting case:

L. A., a girl of 16 years, had suffered from bilateral suppurative otitis media since early childhood, both drum membranes being practically destroyed. She had experienced the usual infectious diseases of childhood, the past history being otherwise negative as to conditions bearing upon the aural lesions.

On February 9th, 1910, when first seen by the writer, she presented, in addition to the symptoms characteristic of chronic bilateral middle ear suppuration, the physical signs of an acute inflammatory process involving the right mastoid. Her temperature at this time was 100.4° F. She gave a history of having been dizzy at times during the past three or four days, but showed no disturbance of static equilibrium, and walked with normal ease. She exhibited at this time moderate physiologic nystagmus when the eyes were rotated to the extreme lateral position in either direction. She complained chiefly of pain referred to the right mastoid, which also was exquisitely sensitive to pressure. The patient presented the appearance of greater illness than is usual in cases of mastoiditis of average severity. She was, therefore, admitted to the Manhattan Eye, Ear and Throat Hospital and prepared for immediate operation.

At the operation on the right mastoid little fluid pus was found except in the mastoid antrum, until the sigmoid sinus was exposed, when a small perisinous abscess was found.

On the fifth and sixth days after operation patient complained of headache and dizziness. Examination of the eyes showed absolutely no nystagmus when the patient looked directly in front of her, but moderate rotary nystagmus when the eyes were voluntarily rotated to the extreme lateral position in either direction; the quick eye movement always changing to correspond with the direction in which the eyes were turned. In type it corresponded to the so-called physiologic nystagmus. During this time the temperature ranged near the normal line, with two moderate rises, the highest being 101° F.

On the tenth day while dressing the wound, the author applied the caloric test, using first cold and then hot water but obtained no reaction. Hearing was found to be very acute. Three days later the patient again had a severe headache and dizziness with one attack of vomiting. She still exhibited rotary nystagmus when the eyes were turned strongly in either lateral direction but the nystagmus to the right was now altogether stronger and more prolonged than that following voluntary rotation to the left. When the patient stood up her subjective vertigo was increased and had she not been supported she would have fallen to the right.

This action was frequently tested and was constant, i.e., she fell, or without support would have fallen, always to the right. Lying in bed she now exhibited well marked incoordination ataxia of the right hand, as shown by the difficulty in bringing her right forefinger promptly and accurately to the tip of her nose.

When told to rotate both wrists as rapidly as possible, she was apt to rotate the left wrist quickly while the right rotated very slowly.

Disease of the labyrinth was excluded upon the following grounds:

1. A suppurative lesion of the labyrinth of sufficient severity to annul caloric irritability would almost inevitably have involved the cochlea and produced deafness, usually profound. The hearing in this case was remarkably good.

2. A suppurative lesion of the labyrinth, causing loss of caloric reaction, would give rise to rotary nystagmus toward the opposite ear. In this case the nystagmus was most pronounced and prolonged toward the diseased ear.

3. With nystagmus to the right, caused by a labyrinthine lesion, the patient would have fallen to the left. This patient fell invariably to the right.

4. With active nystagmus and vertigo resulting from labyrinthine disease, the direction in which a patient falls is always influenced by the position of the head. This patient fell to the right, irrespective of the position of the head.

The following secondary operation was then performed:

The old wound was cleaned out, and the anterior aspect of the cerebellum uncovered by the removal of bone in front of and internal to the sinus.

A narrow-bladed knife was introduced in two directions, first inward and backward and then in a more backward direction, but the abscess was not reached.

An exposure of the occipital surface of the cerebellum was then made by the removal of bone behind the sinus. The second incision into the brain, the knife being carried inward and forward, was followed by the escape of fluid pus.

Two days after operation the nystagmus disappeared, there was no incoordination ataxia and patient made an uninterrupted recovery.

PEDIATRICS**Edited by Henry L. K. Shaw, M. D.**

Prognosis of Tuberculosis in Infants. (Ueber die Prognose der Säuglings-tuberkulose.)

HAHN. *Monatschrift für Kinderheilkunde*, No. 10, 1912.

With the advance in our knowledge of tuberculosis, important differences have been found between the tuberculosis of children and that of adults. This has been made possible by the newer methods of tuberculin diagnosis and by animal experimentation. The text books, however, claim that tuberculosis in infancy has practically a fatal prognosis.

The author bases his paper on 69 cases of tuberculosis which have come under his observation, in young infants. Of these, 48 died, or a mortality of 69 per cent. Of 20 under six months, 15 died. Of 26 from 6 to 12 months, 19 died, making a mortality of 77 per cent in the first year. Of 23 cases, from 12 to 20 months, 14, or 60 per cent, died. The author found no appreciable differences in the mortality of those nourished on breast milk from those artificially fed. An inherited disposition did not seem to exert much influence but the post partum infection was a most important factor. This was shown through the bad surroundings and the presence of one or more tuberculous individuals in the household.

The prognosis depends on the age of the child and is worse but by no means hopeless in the first year of life. It also depends on the clinical course and the localization of the infection. Children who have no temperature and whose body weight increases and in whom the tuberculosis is limited to the lymph glands generally recover. This also applies in the cases in which the disease is confined to the eyes, bones, and joints.

The wide spread tuberculosis, involving the lungs and the internal organs, is generally fatal. The prognosis among illegitimate children is a great deal worse than among legitimate, as they do not seem to be able to resist the infection.

Visible Paristalis of the Stomach in Infants. (Ueber sichtbare Magen-peristaltik beim Säugling.)

HOFFA. *Monatsschrift für Kinderheilkunde*, No. 10, 1912.

All authors writing on pyloric stenosis have emphasized the fact that visible peristaltic movements of the stomach forms a characteristic or pathognomonic symptom. Pfaundler, however, called attention to the fact that peristaltic waves of the stomach are seen in extreme emaciation and laxity of the abdominal muscles. It has also been seen in children with paralysis of the abdominal muscles and in meningitis.

Hoffa believes that the phenomenon of visibly increased peristalsis of the stomach is not uncommonly met with in conditions where there is no stenosis of the stomach or intestinal tract. He quotes the histories of five cases in young infants in which the visible peristalsis of the stomach was a very prominent symptom and in which there was a little or no vomiting.

There were no signs of dilation or atony of the stomach in these cases. All the cases gained in weight normally. The author concludes that visible peristalsis is present in many cases in which there is no narrowing or hindrance at the pylorus.

Observations upon Nervous Manifestations in the Rheumatism of Children.

F. J. POYNTON. *British Journal of Children's Diseases*, February, 1912.

The author believes that the nervous symptoms in rheumatism are the result of either a local infection in the nervous centers, or of a general toxemia, the former being the more important. It is suggested that a bacterial poison may vary according to the anatomical structure which the organism inhabits and that perhaps we are dealing with the same organism exhibiting different metabolic processes under different conditions. Such thoughts are strongly suggestive in view of the fact that the pleura and pericardium are so frequently affected and the peritoneum and pia so rarely. The micrococcus soon loses virulence on agar agar and retains it much longer on fresh blood agar. The tubercle bacilli and other organisms show similar peculiarities. The very common phenomenon, chorea and the rare one, hyperpyrexia, in their relation to rheumatism have been studied with some completeness. Statistics covering a period of eleven years form the basis of this paper. Chorea usually develops before puberty and is infrequent after that period. It is to be inferred that the brain at that time develops a greater resistance to the poison. Females are much more susceptible than males, due, perhaps, to some mysterious peculiarity of female metabolism.

The onset may be abrupt or very gradual. The insidious cases show early signs of rheumatic cerebral disease and may only after weeks show the obvious chorea. The warning symptoms are nervousness, headache, excited imaginations, night-terrors, irritability and fidgetiness. A sudden shock may precipitate the chorea. This brings to notice a great gap in our present knowledge of the relative parts taken by the infective agent and by the toxins. Clinical study seems to justify the presumption that they vary in different cases.

Cholera and epilepsy are associated and not interdependent cerebral lesions. Mental defects seem, however, to follow the onset of chorea or to be associated with it. After the attack there often remain definite

nervous conditions of the child, such as extreme nervousness and irritability, stammering or entire inability to speak for a time.

Pathologically, as elsewhere with rheumatic lesions we get two classes of change, the vascular and inflammatory type, and minute areas of softening.

In an analysis of 500 cases the author has included 225 which came to him with chorea as one or the only symptom, thus assuming them rheumatic. Of the 225, heart lesions and in many cases other rheumatic symptoms were obvious in 122; 28 more were suffering from rheumatic arthritis and pains. In 22 other cases there was dilatation of the heart with no other signs of the rheumatic state. Among the 67 cases not rheumatic, 15 gave a history of fright, and seven suffered later from rheumatic heart disease.

In 10 cases chorea directly followed a sore throat; in 19 there was a history of rheumatic fever in the family.

In considering the treatment the author impresses the fact that chorea is most uncertain as to duration and response to drug treatment. Six weeks is a short time in which to effect a cure. In general, the aim should be to destroy the infection and build up the nervous system. For early and mild cases salicylate of soda combined with bromids in moderate doses; physical and mental rest with special variations in some cases; warm packs at night are very often soothing. For the worst cases the author prefers chloral and bromide, or trional. Chloretoe and antipyrin are also suggested. If one fails, it is well to try another. It has been found that some cases have been relieved by lumbar puncture. The diplococcus has been recovered from the fluid. Arsenic is suggested for cases with normal temperature.

Treatment of Nocturnal Enuresis in Children.

JOHN RUHRÄH. *American Journal of Medical Sciences, Vol. CXLII,*
No. 2, February, 1912.

The writer tabulates the cases of nocturnal enuresis as follows:

Physiological. Taking too much fluid, especially late in the day.

Eliminative. Faulty metabolism, drugs, taking too much salt, etc.

Urinary. Hyperacidity, alkalinity, bacteriuria.

Genito urinary organs. Inflammations, malformations, hypertrophies, calculi, tumors or polypi.

Nervous system. General irritability, hypertonia or irritability of bladder, malformation of the spinal cord, weakness of sphincter of bladder, reflex from (usually) irritation about genital organs or rectum, or from intestinal parasites.

General. Diabetes mellitus, diabetes insipidus, rachitis, thyroid insufficiency, enlarged adenoids and tonsils.

To this list the writer also adds that due to mental deficiency on the part of the child, as well as that due to laziness and that due to the fact that some children sleep so soundly that the call of the distended bladder is unheeded. He notes that formerly there was a large group that was called "essential" or "idiopathic," and points out that as our knowledge of the subject has increased the essential cases have diminished in number. He quotes the remark of Bazy that essential enuresis is essential ignorance. He also emphasizes the fact that enuresis is a symptom of some underlying condition and not a disease in itself.

Some of the children who suffer from enuresis have undeveloped or imperfect spinal cords. This diagnosis can sometimes be only suspected, but he considers the main test to be that the condition persists throughout life despite all treatment. Some of these individuals show other signs of physical degeneracy. Certain cases are apparently of an epileptoid nature, especially those in whom the symptom comes on after the age of five years and is not constant but only comes on at intervals. The theory of Freund that nocturnal enuresis was due to hypertonia of the bladder in patients who also showed an increased muscular tone in the legs, is not borne out by the statistics of later investigators.

The association of adenoids and nocturnal enuresis is interesting and suggestive. Fisher operated on 716 cases, and of these 14.8 per cent had enuresis. Mygin found 7.75 per cent of enuresis cases among 400 cases of adenoids. Gruback found 14.28 per cent among 427 cases. Allaria reported 22 cases, of which 8 were cured, 3 improved, 9 not improved, and 2 cured spontaneously. Of the 8 cases who were not cured, one had a rectal papilloma, and three showed signs of mental degeneration and sometimes had also incontinence of the rectum from a weak sphincter. Kapsau reported 35 cases, all cures, and in a second series of 20 cases 15 were cured and 5 improved. Cautas cured 13 of 15 cases and the remaining 2 were improved. These latter figures are so very favorable that the writer is inclined to feel that there may be some error in them. On the other hand Lilang examined 50 children with enuresis and found only 8 with adenoids. He operated on these and only cured one.

Hamonic has studied the relation between phimosis and incontinence of urine, and he believes that a long adherent prepuce is a factor in causing it. He has performed 187 circumcisions for the exclusive purpose of curing this condition. Of these, 130 were cured, 47 of which were relieved within from two to twenty-five days, and 83 within six weeks. Fifty-seven cases were lost sight of.

Insufficient thyroid secretion has been suggested as a cause of incontinence of urine by several writers. Thus Williams has found a class of cases which may be described as follows: The children have a subnormal temperature, from 96.2° to 97.2° or even lower. They complain of being cold, even though they be overclothed, and they often have what are popularly known as "dead fingers." They are cold even in summer, and suffer more at night than in the day. They are under-

sized and underweight. About one-half of these cases have adenoids but the nasal respiration is perfectly free. They all have a high arched palate. Williams believes that all these things taken together indicate a thyroid insufficiency. Hertoghe has called attention to certain cases of *myxoedema fruste* in childhood, in which nocturnal enuresis was mentioned as one of the symptoms.

As a partial list of remedial agents to be used, or which have been suggested to use, in this condition, the writer mentions the following, in addition to removing any reflex cause of irritation which can be found, such as adenoids, phimosis, etc.:

Restriction of fluids, especially after 5 p. m., diet, protection from cold, rest and quiet life, postural treatment, waking child to empty bladder suggested (not to urinate, to cry out in sleep if there is a desire to urinate), moral hygiene in lazy children, reflex irritations from, passing a catheter or sound, electrical treatments, injections of various fluids, salt solution, or nitrate of silver solution; the administration of drugs, such as, atropine sulphate, strychnine sulphate, bromides, ergot, hexamethylenamine, dessicated thyroids. He discusses the use of various of the remedies suggested.

The use of dessicated thyroids, following the suggestion and observation of Williams is particularly striking where it is effectual. Williams has published two series of cases, all of which belonged to the class previously described. He obtained wonderfully satisfactory results in all but one case and this case did not have a subnormal temperature. He administered the drug in one-half grain doses twice daily in children who were between two and six years of age, and this amount may be increased somewhat for older children. This increase should be made slowly as sometimes the directly opposite effect is produced by over-dosage. The writer has had very satisfactory results with this method of treatment in a small series of cases, and these were not picked cases as evidently were those of Williams. In the writer's cases the results were obtained at once or not at all. In almost every instance in which a favorable result was obtained a marked difference was noticed after the administration of one or two doses of the drug and in all cases within a week. His results also agreed with those of the former writer mentioned in that the children all gained weight rapidly. The writer has observed in his cases that it was not necessary to continue this treatment over a long period of time. In several cases where the children had high arched palates but no subnormal temperature the drug had no effect whatsoever.

Of general methods of treatment the writer emphasizes a non-irritating diet, restriction of the amounts of fluids taken, a quiet, well ordered life, avoiding excitement of all kinds, posture (elevation of the foot of the bed at night), and the use of atropine sulphate in full doses.

Asthma in Children. (L'asthme chez les enfants.)

COMBY. *Archives de Médecine des Enfants*, October, 1911.

Asthma in young children is more frequent than is generally supposed. The author found very few references to it in the bibliography. His study, therefore, was of seventy-five cases which had come under his personal observation. He defines true asthma as a paroxysmal respiratory spasm of nervous origin characterized by intense dyspnoea with bronchial catarrh and a return at intervals of longer or shorter duration. The steadiness of the dyspnoea, the musical character of the rales, the wheezing which can be heard at a distance, the short duration and the periodic return are the more important elements in the diagnosis.

The age in which the first attack occurred was nine in the first six months, fifteen from six to twelve months, thirty-one between one and three years, nine between the third and sixth years and ten after the sixth years. Fifty-six of the seventy-five cases, therefore, occurred in the first three years.

Hereditary influences were established in forty of the cases and the author believes that asthma in children is a form of arthritic diathesis similar to gout, obesity, diabetes, migraine, eczema, etc.

The author states that he has never seen a case of asthma caused by adenoids and if they were present their removal has had no effect upon the return of the attacks. Exciting causes are variable, such as exposure to cold, fatigue, and emotional excitement.

The attacks are more frequent in the winter than in the summer, showing the influence of the wind, humidity and the low temperature. Asthma in children is more catarrhal than in the adult. There is apt to be a slight rise in temperature but it is not excessive. Emphysema does not accompany asthma as frequently as it does in adults. This is owing to the fact that the elasticity of the lung is greater.

A number of nervous manifestations are often associated with asthma such as laryngismus stridulous, spasm of the glottis, convulsions, urticaria, etc. The prognosis is much better in children than in adults and nearly all the cases recover at the time of puberty.

The treatment in the acute attacks consist in the employment of counter irritants, mustard, etc., and drugs such as opium, belladonna and aconite. It is only rarely that one has to give hyperdermic injections of morphine. The favorite preparation of opium is Dover's powder. Between the attacks the general physical condition of the child should be improved by plenty of fresh air, baths, etc. The most efficacious tonics are arsenic and iodide of potash. The author recommends the arsenate of soda.

The Relation of Nasal Obstruction to Articulatory Capacity.

ERNEST JONES. *British Journal of Children's Diseases*, June 1, 1911.

The author presents by numerous tabulations the results of his examination of the articulatory capacity of 700 children with reference to general dyslalic troubles arising from nasal obstruction in comparison

with those who had no anatomical defects. The 700 school children were divided by their teachers into two groups, one comprising those whose speech was thought to be "normal" and the other group, the "defectives." Each child was tested with 227 different consonantal sounds.

The conclusions drawn from the study are:

(1) In average school-children (469 cases, 106,500 tests) the articulatory capacity for consonants is found to vary with the degree of nasal obstruction. The dependence of the capacity on this factor is not very close, but is much more decided with boys than with girls. The incidence of nasal obstruction being equal in the two sexes, it would seem that a given degree of it produces, through partial deafness or in some other way, a more harmful effect on the articulatory capacity of boys than on that of girls. This is in harmony with the author's hypothesis, previously put forward, that hearing is more essential in the acquirement of speech with boys than in girls, the latter making use of a second channel of education, lip-reading, which is shut to boys.

(2) In children with gross articulatory defect of dyslalia (231 cases, 52,000 tests) no correlation whatever was found between the extent of this defect and the degree of nasal obstruction present. Investigation of a larger series might reveal a slight correlation, but nasal obstruction is evidently not an important cause of dyslalia in general, and any action it may have is readily obscured by that of more important factors.

Three Cases of Enlarged Thymus in Infants.

RUPERT WATERHOUSE. *British Journal of Children's Diseases*, June 1, 1911.

The author reports three cases of sudden death in which post-mortem revealed enlarged thymus glands. The first case, aged three months, was sent to hospital on account of urgent dyspnoea which had been present to some extent since birth. The second case, 10 months old, was taken with vomiting and diarrhoea, and died on the third day after admission while being bathed. The third baby, aged nine weeks, was found dead in bed by its mother. In the first case the gland showed nothing especially noteworthy in its structure. The mesenteric lymph glands were enlarged. The second one showed scattered groups of mononuclear cells about twice the diameter of lymphocytes. In the third case, post-mortem showed that the innominate veins and the veins of the head and neck were dark and distended.

These cases do not lend their evidence in support of any single mode by which the thymus acts, but rather that it may cause death in different ways. Other cases similar to the first, have been reported in which the dyspnoea was relieved by removing part of the thymus. Death in such cases as the second have been attributed to "lymphatico-toxemia." The third case, like the first seemed to have a mechanical effect in compressing the great veins.

The Continued Use of Lactose in Infant Feeding. (De L'Emploi Habituel du Lactose Dans L'Alimentation du Nourrisson.)

PEHU and PORCHER. *Archives de Médecine des Enfants*, February, 1911.

Bartholetti discovered and isolated milk sugar in 1619. It was not considered to have any therapeutic or dietetic value until the past twenty years. It now plays a very important rôle in the preparation of milk for infants. Milk sugar is a bihexose and is the only carbohydrate found in the secretion of the mammary gland. It passes through the stomach unchanged but is transformed into glucose and galactose in the small intestine. This is accomplished by means of ferments found in the intestinal secretions. After transformation it is completely absorbed. If too much sugar is given, or the mucous membrane of the intestine is diseased or irritated by some toxic material the point of assimilation will be reached and sugar will be excreted with the feces or urine.

Commercial milk sugar is obtained from cow's milk after the fat and casein have been extracted. It is soluble in six parts of water.

Soxhlet in 1893 was the first to recommend its general use in infant feeding.

Some authors have raised objections to its use and the authors carried on a series of experiments in order to determine the maximum amount that can be assimilated and the disturbances, if any, attributable to its use.

Their researches continued for six months or sixty infants. They found that milk sugar is necessary in the feeding of infants and that any of the commercial varieties can be used. A healthy infant can absorb from 18 to 36 grammes a day given either in solution, powder or in the food.

It is a very powerful agent in regulating the action of the intestines. It is a non-irritating laxative and has a distinct digestive action.

The authors found that glucose, levulose and mannite were purgatives in their action, maltose had the same effect as lactose, and cane sugar and raffinose in large and prolonged doses had a constipating action.

Frequency and Significance of Albumin in the Urines of Normal Children.

SAMUEL MCCLINTOCK HAMILL and KENNETH D. BLACKFAN. *American Journal of Diseases of Children*, February, 1911.

The determinations in this investigation were made from the urines of 124 children ranging from 18 months to 14 years. These children were presumably normal though two groups comprising 67 of the cases were from an orphanage and the orthopedic ward of a hospital.

The specimens were taken during the usual routine life of the children except that they were kept from school. Their food was adequate, digestible and well prepared. Specimens were taken and examined singly at different hours of the day and also for 24 hours.

The urine was examined regularly for specific gravity, color, reaction, the presence of albumin, sugar, acetone, diacetic acid, indican, urobilinogen and phenol; and microscopically for cells, casts, cylindroids and crystals.

The stools were examined in 69 cases and were found normal in 50.

The results of the daily individual tests are tabulated in detail.

The specific gravity varied widely at different periods of the day, usually being higher at the end of the day and on rising in the morning, and has no definite relationship to the amount voided in twenty-four hours.

One case showed there may be marked change in the reaction and composition of the urine within 24 hours or less, this being a daily occurrence in the case cited.

In none of the cases were sugar, acetone or diacetic acid found. Epithelial cells and leucocytes were never present in abnormal quantities.

Casts and cylindroids were found either separately or conjointly in 28 children.

Albumin was present at some time in the urines of 110 out of the 124 children.

The relation of the presence of albumin to the associated urinary constituents and other factors is shown by a summary given at the conclusion of the article.

1. There has been no relationship between the specific gravity and the form or amount of albumin.

2. The reaction has had no influence on the production of albumin.

3. Sugar, acetone, and diacetic acid were never found. They may, therefore, be considered as having no bearing on the production of albumin.

4. Indican, phenol, and urobilinogen when present were usually associated with albumin, but albumin was sometimes absent when they were all present, and the amount was never greater when associated with them than it was in the cases in which they were absent.

5. Crystals, when present in amounts, such as are occasionally found in normal children, are in no way responsible for the associated albumin.

6. The mild disturbances of the intestinal digestion, as shown by the examination of the stools, were not sufficient to account for the occurrence of albumin.

7. The blood-pressure was within the normal range in all cases and, therefore, did not influence the albumin output.

8. The albumin elimination was the same on mixed and exclusive milk diets.

9. No children were found in whom the albumin excretion corresponded to the requirements for postural or orthostatic albuminuria, a rather surprising result in view of the frequency with which this condition is supposed to occur.

10. Thirty-two and one-half per cent of the children showed occasional hyaline casts and cylindroids in their urines. Their "occasional presence" is not considered indicative of a lesion of the kidneys, but

rather as suggesting a temporary overtaxation of the kidneys, resulting from variations in the habits of life of the individuals which are too slight to be recognized.

11. Eighty-eight and seven-tenths per cent of the urines of these 124 children showed albumin, 27.4 per cent showing serum-albumin alone, and in combination; and 85.4 per cent an albuminous body precipitated by acetic acid in the cold. These two albumins were nearly always present in very slight traces, occasionally in slight traces and rarely in traces.

In thirty-eight children the twenty-four-hour specimens showed nucleo-albumin in all but one, and in this case samples examined over prolonged periods of time showed nucleo-albumin frequently.

In these thirty-eight children, the percentage of serum-albumin was much higher (42.1 per cent) than in the total number of cases examined. The authors believe that it is possible to demonstrate in the urine of every presumably healthy child, traces of a albuminous body precipitated by acetic acid. Consequently, this substance must be regarded as exceedingly common, if not constant manifestation in the urine of children under 14 years of age and as of no clinical significance.

They do not believe that serum-albumin in the amount in which it appears in these children indicates a diseased condition of the kidneys any more than does the presence of occasional hyaline casts and cylindroids, and that its etiology may be considered the same as that given for these former elements.

GYNECOLOGY

Edited by John A. Sampson, M. D.

The Treatment of Placenta Previa at the Sloane Hospital for Women

EDWIN B. CRAGIN. *American Journal of Obstetrics.* Vol. 64, No. 403, July, 1911.

The cases of the above condition (174 in number) occurring in the first 20,000 consecutive deliveries in the hospital were treated by different methods: by Braxton-Hicks' version and the use of the half-breech as a uterine tampon, by means of vaginal and cervical tampons and by the use of elastic bags as cervical dilators.

The cases of placenta previa (49 in number) presenting themselves in the subsequent 5,000 deliveries, were treated by the use of the elastic bag alone, both to dilate the cervix and to control the hemorrhage, preliminary to any other method of delivery.

The largest Voorhees bag (No. 3 or 4) that can be introduced, is used, care being taken not to rupture the membranes. While the most complete dilatation is secured, of course, by the use of the No. 4 bag,

the possibility of upward displacement of the presenting part by a bag of its size must be borne in mind; but since delivery is so frequently accomplished by means of version, there appears little objection to such displacement. The advantage to mother and to child that the most complete dilatation preliminary to version affords is apparent.

The extra-ovular position of the bag is important for, with it, the membranes remain intact. Version therefore is rendered more easy when necessary; or artificial rupture of the membranes, causing the presenting part to press upon the lower uterine segment and placenta, may be resorted to in an effort to terminate labor spontaneously when the placenta previa is incomplete and the hemorrhage is so slight that more speedy procedures are not necessary.

The bag in its extra-ovular location readily checks hemorrhage and does not dissect off the placenta to any great extent in the incomplete variety. In complete placenta previa the blood loss is less when the bag is placed beneath the placenta than when the latter is bored through and the bag placed within the amniotic sac; and placing the bag beneath the placenta seems not to interfere with the utero-placental circulation more than do other methods employed by vagina.

Treated by means of the extra-ovular position of the Voorhees bag the maternal mortality for the complete variety was 14.2 per cent, for the incomplete 5.7 per cent: the total infant mortality being 51 per cent. Excluding pregnancies less advanced than seven months, "63.1 per cent of children viable on the admission of the mother left the hospital alive." Maternal and foetal mortality attending the earlier methods of treatment are not as satisfactory.

The author believes that the presence of a long, rigid and undilated cervix and profuse hemorrhage constitutes the only indication for Caesarean section in placenta previa.

Mortality statistics	Class A.	Class B.
Mothers, Complete Plac. Prev.....	23 %	14.2%
Mothers, Incomplete Plac. Prev.....	8.1%	5.7%
Infants	60.3%	51 %

P. T. H.

A Review of Seventy-Three Cases of Dudley's Operation for Dysmenorrhœa and Sterility.

SAMUEL BRICKNER. *Surgery, Gynecology and Obstetrics*, November, 1911.

The operation is intended for dysmenorrhœa and sterility in patients having a small anteflexed uterus with a long conical cervix. The cervix is first dilated, and the posterior lip of the cervix is incised in the median line by scissors as far back as the utero-vaginal attachment. The cut surface on each side is then folded on itself by a suture, this suture is tied and fortified by interrupted sutures on each side. By this

operation the external os is carried directly back to the angle of the incision. The cervix now points backward in its normal direction toward the hollow of the sacrum instead of forward toward the vaginal outlet.

The author's patients complained either of sterility or dysmenorrhoea, or both. Dysmenorrhoea was relieved in 64.3 per cent, not relieved in 33.3 per cent, and worse in 2.4 per cent; sterility was relieved in 27 per cent, not relieved in 73 per cent.

The writer has delivered seven women upon whom the Dudley operation had been performed, and the cervix did not interfere with the labor.

He concludes that the operation can be recommended in suitable cases for the relief of dysmenorrhoea and sterility, and it is of greater value in the relief of the former than the latter. The resulting scar in the cervix does not interfere with labor, dilatation being normal. No operation for sterility should ever be done until the husband is found to possess living spermatozoa.

A Contribution to the Origin of Uterine Muscle in Relation to Blood Vessels.

H. R. CLARKE. *The Journal of Obstetrics and Gynecology of the British Empire*, September, 1911.

During foetal life the uterus has a trabecular arrangement, the arteries appear to grow into the trabeculae from the broad ligament, the venous spaces seem to arise *in situ*.

As early as the third month small spaces are found in the uterus, a few of which appear to contain blood corpuscles. A little later fine arteries are found, having the appearance of growing into the uterine substance from the broad ligament. By five months there are indications of these arteries invading the spaces (venous) described above. By the completion of intra-uterine life the arterial ingrowth has proceeded as far as the endometrium. The venous spaces of the myometrium are invaginated by these arteries,—this process he calls "Condensation." The muscular tissue of the uterus has also greatly increased and has arisen, in part from the muscular tissue of the arteries invading its walls.

During infancy the arterial invasion continues, and the process of "Condensation" is completed by the end of six or seven years. The muscular tissue has also increased. The cavernous tissue of the myometrium is similar to that which exists in erectile tissue, i. e., corpora cavernosa, foetal heart of man and adult heart of some amphibia.

The venous spaces in the cavernous tissue of the human uterus are not obliterated later in life, but remain as potential rather than actual spaces, and are concerned in the erection of the uterus and in the formation of maternal blood sinuses during pregnancy.

The development of uterine muscle during foetal and infant life takes place in definite relation to vascular structures. In other words, it is in the development of muscular tissue in the trabeculae of the mesh-work of the cavernous structures and the muscular growth in the walls of the arteries that growth of the uterine wall takes place. Injected specimens show that the arteries communicate with the venous spaces, and also serve to indicate the great vascularity of the uterus.

Repeated Ectopic Pregnancy (With a Report of Four Cases and a Statistical Review of the Literature).

RICHARD R. SMITH. *The American Journal of Obstetrics, September, 1911.*

The writer had encountered four instances of ectopic pregnancy recurring in thirty-six patients who had been operated upon by him for this condition. He reports these cases in full and reviews the literature on the subject.

By correspondence he obtained the report of fifty-eight instances of repeated ectopic pregnancy in 1,608 patients, and from a review of the literature he found fifty-five in 1,390 cases, i. e., 113 cases of recurrence in 2,998, or slightly less than 3.8 per cent.

In 132 cases in which information was given nine women became pregnant during the interval between the two ectopic gestations. Seven of them were normal pregnancies and two resulted in abortions. In not a single instance was there an interval pregnancy in a patient who had never had a previous one. The writer was unable to obtain satisfactory statistics as regards the frequency of normal pregnancy following an ectopic, but concludes from the data obtained that it does not occur as frequent as one might hopefully expect.

He suggests that the matter of future possibilities be fully discussed as far as practicable with each patient before operating. If a woman has had no children and is young or, being older, is desirous of having children, we should preserve the opposite tube unless it is hopelessly closed. We do this deliberately with the full knowledge that further pregnancies may not occur and that she may have, in spite of the normal appearance of the tube, another ectopic pregnancy. In women who have had children, we may be governed by her desire to have more and may leave the opposite tube unless it is absolutely closed. In women who have had children and have borne as many as they desire, we should unhesitatingly remove the opposite tube and preclude the possibility of further ectopic pregnancy whether the tube appears normal or not.

*The Return of Menstruation after Curettage. (Ueber den Eintritt der Menstruation nach Abrasio.)*FRANZ JAEGER. *Zentralblatt für Gynäkologie*, September 23, 1911.

The writer states that he has been able to find but little in the literature concerning the influence of curettage on menstruation.

He reports the observations of his own in fifty patients who had been curetted.

Twenty-five had been curetted either for endometritis, hypoplasia of the uterus, dysmenorrhoea or sterility. In sixteen of these the subsequent menstruation appeared at the regular time; in four at approximately the regular time being too early by two days in one and two days delayed in three; in one case it came two weeks ahead of time and in four others it was delayed, two for two weeks, one for three weeks, and one patient failed to menstruate at the next regular time but did the following one. In 80 per cent of the cases, the curettage did not essentially influence subsequent menstruation. In ten of the cases menstruation appeared within two weeks of the curettage, and in three within five days. The writer concludes that menstruation is not dependent upon the condition of the endometrium but upon the activity of the ovaries.

In twenty-five patients curetted for abortion, menstruation appeared in fourteen, in from three to four weeks after the curettage. He concludes that the appearance of menstruation after abortion, as well as after full term labor, is not dependent upon the regeneration of the endometrium or involution of the uterus, but upon the antagonistic correlation between the function of the ovaries and the placenta.

*Fatal Mercurial Poisoning Due to Vaginal Introduction of Bichloride Tablets. (Report of Three Cases.)*C. B. SCHILDECKER. *The American Journal of Obstetrics*, March, 1911

Case 1—A young woman introduced six 7.3-grain tablets into the vagina for the purpose of preventing conception. This caused burning pain; the patient was unable to remove the tablets. A physician was summoned, who arrived about thirty-five minutes later and gave vaginal douches of warm water and morphine hypodermically for the relief of the pain. In the course of a few hours intense symptoms of mercurial poisoning developed, i. e., salivation, entero-colitis, muscular tremor, suppression of urine with consequent uremia and collapse. The patient died four days later.

At autopsy there was found: an intense necrotic exfoliative entero-colitis, most intense in the rectum and extending as high as the duodenum; a necrotic degeneration of the mucosa and walls of the vagina and vaginal portion of the cervix, the broad ligaments, tubes and ovaries

The Influence of the Trendelenburg Position on the Quantity of Urine Excreted During Anesthesia.

J. W. BOVEE. *American Journal of Medical Sciences*, January, 1911.

The writer studied eight cases of ether anesthesia, and eight of chloroform, when this position was used.

The quality of urine for a twenty-four-hour period remote from the operation was obtained. From twelve to fourteen hours before the operation, liquid food in limited quantities was given and the bowels were moved two or three times, the last by an enema. No morphia, atropine or other drugs were used nor was salt solution in any manner employed. A retention catheter was placed in the bladder when the administration of the anesthetic was begun and after emptying the bladder, the catheter was clamped. The clamp was removed when about to place the patient in the Trendelenburg position and the bladder was emptied. At the end of each fifteen minutes that the patient was in this position the bladder was emptied. This was facilitated by pressure upon the bladder with the fingers in the peritoneal cavity. The urine was drawn immediately after the patient was returned to the horizontal position and at the end of each subsequent fifteen minutes during the administration of the anesthetic. During the following two days the urine was carefully measured, usually every fifteen minutes of the first two hours.

In this series the decrease in the excretion of urine while the patient was in the Trendelenburg position was 58 per cent in ether anesthesia and 82 per cent in chloroform. This great decrease was not, even in moderate degree, due to urine being retained in the renal-pelvis for the rate of the flow subsequent to changing the patient to the horizontal position was not suddenly greatly increased.

The writer concludes that the renal function is greatly lessened while the patient is in the Trendelenburg position. In renal efficiency, and cardiac and arterial lesions, it would seem that the use of this position introduces a special element of danger and this less markedly when ether is used than when chloroform is employed as the anesthetic.

On the Occurrence of Carcinoma in Cystic Teratomata of the Ovary.

H. WILLIAMSON and J. BARRIS. *The Journal of Obstetrics and Gynecology of the British Empire*, November, 1911.

The writers state it is well known that the majority of cystic ovarian teratomata are benign in the sense that they neither invade adjacent organs or give rise to metastases. On the other hand the majority of solid ovarian teratomata are malignant. One must not confuse "epithelial infection" with malignancy. The phenomenon of epithelial infection is occasionally found associated with many varieties of ovarian cysts. If the cyst ruptures detached portions of the epithelium lining

the cyst may become implanted upon the surface of the peritoneum and give rise to secondary growths which are not malignant but persist as surface growths. These secondary tumors are often transient, and if the parent cyst—the seed supply—be removed, usually disappear.

The recorded cases in which carcinomata and dermoid cysts were found in the same ovary may be divided into three classes:

1. Where the dermoid has been invaded by carcinoma arising in an adjacent organ.
2. Two distinct tumors in the same ovary, one a dermoid and the other a carcinoma.
3. When carcinoma has arisen in the epithelial structures of the dermoid cyst itself.

The writers quote from the literature an example of each of the first two groups, and consider in detail the third group.

They found in the literature thirty-two cases reported where squamous-celled carcinoma had developed in an ovarian dermoid. They have accepted only sixteen of these as being authentic. An abstract of the sixteen accepted cases is given, and they report in detail four cases of their own.

They conclude that ovarian dermoids, which in the vast majority of cases are benign, may occasionally be the site of origin of a malignant growth.

PATHOLOGY AND BACTERIOLOGY

Edited by Thomas Ordway, M. D., and Harry S. Bernstein, M. D.

Variations in the Complement Activity and Fixability of Guinea Pig Serum.

HIDEYO NOGUCHI AND J. BRONFENBRENNER. *Journal of Experimental Medicine*, Vol. XIII, No. 1, January 5, 1911.

Noguchi noted that goat serum, while fresh and active, remains undeviated by the Wassermann reaction or by any combination of specific antigen and anti-body. Question arose if similar action might not be found in sera of other animals or in sera of individuals of a species in which the complement is generally capable of deviation. In this work the authors make quantitative estimation of complementary activity of guinea pig serum with simultaneous determinations on the fixability of each.

Method of study.—For the titration of the activity of complement one per cent. solution of human corpuscles and amboceptor in constant doses were used. To these the complement to be titrated was added in graduated quantities. For the determination of the fixability of the complement the ordinary test for syphilis was carried out.

The determination of the amount of fixed complement was made by reading according to the colorimetric method of Madsen, the degree of hemolysis present in a tube where an incomplete fixation had taken place, and then calculating the approximate amount of complement still free. As the exact amount of complement originally employed is known, it is an easy matter to calculate the amount of complement which had been fixed.

The sera of forty-one guinea pigs were examined. It was somewhat unexpected to find that complementary activity increased after sera remained in contact with the clot for forty-six hours, when compared with the activity of the same sera left in contact with the clot for twenty-four hours after bleeding.

Average titers for first (twenty-four hours) and second (forty-six hours) determinations are nearly the same, being .0216 c.c. for the first, and .0209 c.c. for the second. These titers are only relative.

In the fixation phenomenon, there was great variation in fixability and the contrast between the extremes is most striking.

One non-fixable serum showed no abnormal complementary activity and the highest fixable serum had also the usual titers of activity. The average amount of serum fixed was .098 c.c. The sera may be classified accordingly to degree of fixability into four groups.

1. Group of non-fixability, 1 specimen.
2. Group of inferior fixability, 8 specimens.
3. Group of normal fixability, 20 specimens.
4. Group of superfixability, 12 specimens.

Summary.—The complementary activity varies within a definite limit in different specimens of guinea pig serum. With sera which stood in contact with the clot for twenty hours, the strongest and weakest were in the ratio of 0.015 cubic centimeter to 0.04 cubic centimeter. The former was 2.66 times stronger than the latter. The variation observed with the same series of sera after forty-six hours was still more striking. The strongest was 0.013 cubic centimeter, and the weakest, 0.06 cubic centimeter, that is, the former was 4.6 times stronger than the latter.

The amount of serum fixed by given constant quantities of syphilitic serum and antigen varies much more markedly than the variations in their complementary activity. One serum failed altogether to be fixed. On the other hand, one sample of serum was so easily fixable that 0.24 cubic centimeter (corresponding to 9.6 complement units of this specimen) disappeared, while the average quantity fixed was only 0.098 cubic centimeter (corresponding to 4.64 complement units). There is no definite fixability of a given specimen of guinea-pig serum.

The facts derived from our present experiments, especially in regard to the exceptions in the fixative quality of this serum, demand the utmost precaution from those intending to employ it for diagnostic purposes, as, for example, in the Wasserman reaction. No quantitative

work is possible with the complement fixation reaction unless the experimenter is capable of determining the fixability of the serum in use. One of us (Noguchi) has long realized this source of error, and in order to reduce it he has advised the employment of a mixture of sera from more than two guinea pigs.

The Direct Cultivation of Treponema Pallidum Pathogenic for the Monkey.

HIDEO NOGUCHI. *Journal of Experimental Medicine*, Vol. XV, January 1, 1912.

Two conditions are important in the direct cultivation of spirochaete from primary lesions; first, the maintenance of strict anaerobiosis; and second, the property possessed by the organisms of migrating in the solid medium in which they are multiplying. The medium used consists of two parts of melted agar and one part of ascitic fluid to which has been added a fragment of sterile tissue.

The material to be cultivated is obtained from chancre or skin papules from which small pieces are snipped off. They are immersed in sterile salt solution containing 1% sodium citrate. One piece is emulsified in a mortar with citrate solution. Each culture tube is then inoculated with a fragment of the pallidum-containing tissue, and into the same tube several drops of the emulsion are introduced. The tubes are then incubated for two or three weeks. A dense opaque growth of bacteria along the stab canal and about the wall of the tube takes place. These cultures are impure. Fresh agar tubes are inoculated by the stab method from the growth and are incubated from two to three weeks longer. A faint hazy zone will be seen to radiate from the stab canal towards the sides of the tube. This hazy appearance is caused by masses of the pallidum that are growing away from the bacteria. Another transfer is made.

The tube is cracked by applying a pointed hot glass. The agar column is next bent so that it breaks transversely. A capillary pipette is introduced into the haze and other agar tubes are again inoculated. Several transfers are required before pure cultures are obtained. The colonies of the pallidum are faintly visible and rarely discrete, and the growth is most about the fragment of sterile tissue.

Inoculation of the pure cultures into the skin of two species of lower monkeys was followed by the production of lesions resembling the primary syphilitic lesion occurring in man and those caused in the monkey by inoculation of spirochaetae-containing serum from human sources.

During the course of the positive inoculation in the monkey, the blood develops the property of giving a positive Wassermann reaction. Thus the relation of *Treponema pallidum* to this reaction is supported and the identity of the cultivated strains with the species found in human syphilitic lesions established.

Hodgkin's Disease and Sarcoma of the Cervical Glands. A Study of the Surgical Pathology of Forty-three Cases.

J. M. BLACKFORD. *Surgery, Gynecology and Obstetrics*, Vol. XIV, January, 1912.

The author discusses the surgical pathology of forty-three cases of early cervical adenitis. He considers chiefly lymphosarcoma, Hodgkin's disease, and non-caseating tuberculosis. The two last conditions are somewhat confusing. Some authorities have found tubercle bacilli in glands considered Hodgkin's disease without a superimposed tuberculous process. Others believe Hodgkin's disease to be a transitional stage between tuberculosis and sarcoma. Spirochetes in great abundance have been also observed in two cases of Hodgkin's.

Hodgkin's disease may be defined, clinically, as a progressive and painless enlargement of the lymph nodes, producing, or associated with, anaemia; later accompanied by enlargement of the spleen and liver, and terminating in death. The disease usually first appears as unilateral discrete cervical glands, which remain discrete even after the glands have become generally enlarged. The microscopic picture shows (1) Proliferation of large, quite typical endothelial cells, (2) Production of numerous multinucleated giant cells, (3) Progressive fibrosis, and (4) Abundance of eosinophilic cells. The growth of the gland is not like that of a malignant tumor in that they are definitely encapsulated, do not metastasize, and in general, do not show vegetative characteristics.

Lympho-sarcoma is the most common type of primary sarcoma of lymph nodes. The cells are round, rather small with scant protoplasm. Fibrosis is uniformly present. The glands are at first discrete, later fuse, and invade surrounding tissues. Noncaseating tuberculous lymph nodes are unusual. The diagnosis of tuberculosis in such cases is difficult, often impossible. Endothelial proliferation found uniformly, however, is very suggestive. A differential diagnosis is made on the following features:—

In Hodgkin's disease the endothelial proliferation shows very large cells, usually isolated, or few together. These cells are easily distinguished under the low power of the microscope. Giant cells are often quite numerous and tend to be of a characteristic type, with nuclei heaped together in the centre of the cell, and with relatively little protoplasm. The fibrous tissue reaction is rather typical on account of its uniformity, its frequent tendency to hyalinization, and its apparently progressive nature. The eosinophilic cells are also typical.

In lymphosarcoma an endothelial proliferation may be found, but the proliferation resembles that of an early inflammatory reaction. A fibrous reticulum is always present and this feature may, in certain cases, resemble closely Hodgkin's disease. Giant cells are not usually seen.

Tuberculous glands, if carefully examined, almost invariably show necrosis and caseation. The fibrous tissue reaction is often extensive. The giant cells of tuberculosis do not resemble those of Hodgkin's disease, since they are larger, have nuclei peripherally arranged, and are surrounded by a zone of endothelial cells.

The following conclusions are based on the result of this study:

1. Hodgkin's disease, lymphosarcoma, and tuberculosis present three different pathologic pictures, and run three different clinical courses, i.e., are probably three distinct entities.
 2. Early clinical differential diagnosis between chronic adenitis, tuberculus, Hodgkin's disease, and lymphosarcoma is practically impossible.
 3. While the advisability of radical surgical treatment of sarcoma or Hodgkin's disease may be questioned, yet in any case of doubt one or more glands should be excised and submitted to a competent pathologist.
 4. Hodgkin's disease runs a slower course than sarcoma.
 5. Hodgkin's disease is more common before the age of 35 and lymphosarcoma is more common after the age of 35.
 6. The prognosis is very grave in both Hodgkin's disease and sarcoma of the cervical glands.
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A Cutaneous Reaction in Syphilis.

HIDEYO NOGUCHI. *Journal of Experimental Medicine*, Vol. XIV, No. 6, December 1, 1911.

Von Pirquet's discovery of a specific cutaneous reaction for tuberculosis stimulated many investigators to obtain a similar skin reaction for syphilis. Extracts of syphilitic tissues, prepared from syphilitic fetal liver or chancre, were applied to skin of syphilitics. Nesser applied the term "Unstimmung" to the susceptibility of the skin of syphilitics. With the cultivation of *Theponema Pallidum*, organisms of different ages and their metabolic products are available for the reaction.

Organisms are grown in ascitic fluid agar and ascitic fluid. The agar columns are ground up in a sterile mortar; the resulting paste is diluted with the fluid culture until emulsion becomes clear. The preparation is next heated to 60 degrees C. for sixty minutes and 0.5 per cent carbolic acid added. Cultures and inoculation in testicle of rabbits are made from this suspension to prove its sterility. Luetin is the name given to the suspension. An emulsion, made from carbolized and uninoculated culture medium, is used as negative control. The injection of .05 c.c.m. of luetin is made intradermically, as superficially as possible, with a fine needle on one arm, and the control suspension inoculated on the corresponding site of the other arm.

Four hundred human subjects were studied; of these 177 were of syphilitic nature, 77 of parasyphilitic nature, and 146 represented various controls.

Emulsions, both luetin and control, were applied to about fifty normal individuals. In the majority of these, there appears after twenty-four hours, a small erythematous area at and around point of injection. The reaction gradually recedes within forty-eight hours and leaves no induration. In some individuals, a small papule formation takes place which subsides.

Positive reactions give the following manifestations:

(a) Papular form. A large, raised, reddish, indurated papule, five to ten mm. in diameter makes its appearance in twenty-four to forty-eight hours. Dimensions and degree of induration increase during the following three or four days. At the end of a week, induration disappears. Cases of congenital syphilis show this reaction.

(b) Pustular form. The beginning of this reaction is like the previous one until the fourth or fifth day. Then the surface of the indurated, round papule becomes mildly oedematous and multiple miliary vesicles form. A central softening of the papule can be seen and the papule changes into a vesicle filled with an opaque serum that later becomes definitely purulent. This reaction is found constantly in cases of tertiary syphilis, as well as in cases of secondary or hereditary syphilis which had been treated with salvarsan.

(c) Torpid form. In rare instances, injection sites fade away in two or three days. But suddenly they light up again after ten days and progress to a small pustular formation.

No marked constitutional effect followed inoculation of luetin, save for a slight rise in temperature of one day's duration.

Nine cases amongst the 177 cases of syphilis showed a reaction at the site of the negative control; but the reaction was less intense than the one given by luetin in the same individuals.

Cases of primary and secondary syphilis showed no skin reaction except in a few instances.

In tertiary and hereditary syphilis the skin reacts intensely to luetin. In these cases the Wassermann reaction is frequently absent, especially after specific treatment and it is important to find that the skin reaction is more constant than the Wassermann reaction in tertiary syphilis. The results of the luetin reaction in syphilis of the central nervous system are, however, less constant than is the Wassermann reaction.

The controls include 46 normal individuals and 100 individuals suffering from various non-syphilitic affections; and they all gave a negative luetin reaction.

The results in parasyphilitic cases are unsatisfactory. Forty-five cases out of seventy-two reacted positively.

Of five cases of tabes, three reacted positively.

Conclusions:

(a) Luetin is a term proposed for an emulsion or extract of pure culture of *Treponema Pallidum* which is designed to be employed for obtaining, in suitable cases, a specific cutaneous reaction that may become a valuable diagnostic sign in certain stages or forms of syphilitic infection.

(b) The luetin produces a similar cutaneous reaction in syphilitic and parasyphilitic patients that is most constant and severe in the tertiary and hereditary affections. In the series of cases, it was present constantly (100 per cent) in the manifest tertiary affection, in 94 per cent of latent tertiary affection, and in 96 per cent of the hereditary affection.

(c) It remains to be determined in how far the cutaneous reaction with luetin can be used to supplement the Wassermann reaction in determining the complete and permanent suppression of a syphilitic affection.

(d) It appears probable that the Wassermann reaction is more constant in the primary and secondary, and the cutaneous reaction in the tertiary and latent forms of syphilis. Moreover, it appears that the Wassermann reaction is more directly and immediately affected by anti-syphilitic treatment than is the cutaneous reaction.

Precipitation Tests for Syphilis.

LAWRENCE W. STRONG. *Journal of Medical Research*, Vol. XXV, No. 1.

During the development of the complement fixation test for syphilis, the Ehrlich anti-body-antigen concept has been abandoned. Precipitates have been obtained by use of cholesterol and sodium glycocholate with the blood serum.

Author examined 82 cases with cholesterol and controlled results with the Noguchi method. There was agreement in 12 positive and 43 negative cases, and discrepancy in 27. In ten per cent of this series, cholesterol was positive in cases not syphilitic in character. Precipitation test was next attempted with antigen used for the Noguchi test, but without the intervention of complement.

Equal parts of serum and freshly prepared emulsions of antigen were used. This mixture caused precipitation similar to sodium glycocholate. There were 20 negative agreements and seven positive agreements. One case without syphilis gave positive precipitate to the antigen. On the other hand, reaction may be entirely absent in cases giving strongly positive Noguchi reaction.

Globulin content of serum is increased and this increase can be proved chemically. Syphilitic anti-body is contained in or precipitated with the globulin.

Flocculation or precipitation tests of serum cannot be expected to have value in diagnosis of syphilis, as increased globulin in serum may be present in other conditions than syphilis.

The relation of globulin to the Wasserman test was studied. Blood serum was dialyzed and globulin precipitated with carbon dioxide and re-dissolved in saline. Whole blood, globulin, and albumin were each tested by the Noguchi method in twenty-four cases. Globulin gave a positive reaction in four cases where syphilis was suspected clinically, but where reaction of whole serum was negative. In all other cases globulin and serum corresponded. Albumin, after removal of globulin, gave a positive reaction only in cases where the serum was strongly positive.

These observations point to a removal of the syphilis anti-body from serum albumin and its condensation in the globulin.

On Certain Limitations in Interpreting Thyroid Histology.

DAVID MARINE, M. D., and C. H. LENHART, M. D. *Bulletin of the Johns Hopkins Hospital, Vol. XXII, page 217, July, 1911.*

It has been recognized that thyroid tissue is labile—reacting quickly to relatively slight physiological variations in the body metabolism and for this reason may show even daily histological changes within narrow limits. The histological standard of the normal gland is arbitrary. In the case of mammals the best way to obtain an accurate conception of the least amount of thyroid tissue compatible with normal body function (the normal) is to give minute doses of iodine to a pregnant bitch throughout the pregnancy and after birth to continue the same with the pups up to the sixth month of extra-uterine life; then examine their thyroids histologically, estimate the iodin contents and the relation of the thyroid weight to the body weight. Even then one may not find all the thyroid follicles containing colloid of uniform standing reactions or the lining epithelium of uniform shape and size. One will find that the variations are slight, considering that the measuring rod is usually delicate as compared with that of most body tissues.

The authors have adopted the low cuboidal cell as most nearly conforming with the normal type of thyroid epithelium.

Variations of the fish thyroid are the same as those of the mammalian; but pathological changes do not take place so rapidly in the former. Studies in comparative pathology of the thyroid gland have shown that in artificially reared carnivorous fish (the trout and salmon, particularly) the thyroid is capable of relatively as great overgrowth as in any other order of vertebrates. Some observers have regarded this overgrowth as carcinoma, because of apparent invasion by thyroid cells of the surrounding structures. In the fish, however, the thyroid gland has no capsule and invasion has not much significance.

In actively hyperplastic thyroids, the follicles show variations in the size of epithelial cells and in the colloid content more marked than are seen in the normal.

These points are mentioned to show that in any phase of the histology of the thyroid one may place a too literal interpretation on slight variations in this very labile tissue which could not be detected at all in tissues less well endowed with the power of hypertrophy and hyperplasia. It is the general and predominating type of changes throughout the gland and not the accidental condition present in certain follicles that determine the state of the gland so far as functional activity is concerned.

A Study of Streptococci by the Complement-Fixation and Conglutination Reaction.

HOMER F. SWIFT and W. THOW. *Archives of Internal Medicine, Vol. VII, No. 1, January, 1911.*

The authors refer to previous work in which the etiological relationship of certain bacteria has been studied by finding specific anti-bodies in the blood. They give in detail their method of complement-fixation, laying particular emphasis on the methods used in the preparation of the bacterial antigen. The best results were obtained by using extracts which had been dried, then ground up and shaken in salt solution. The advantages of this method are that, the bacteria may be grown in large quantities and after being dried, kept indefinitely, fresh extracts being made as required; that a number of extracts of different strains can be prepared simultaneously, made by weight, and therefore more comparable than by volume or surface. They describe the conglutination reaction in brief, as a reaction in which a colloidal substance, termed conglutin, occurring in beef serum (heated to 56 degrees centigrade) causes a characteristic clumping and increased lysis of red blood corpuscles, when treated with a specific serum to which fresh alexine has been added.

A typical clumping is produced by a mixture of bacteria, fresh complement, conglutinin, and specific immune serum, from which agglutinations have been removed by absorption. The conglutinin is present in the globulin fraction.

The details of this technique are given. They conclude that (1) The conglutination reaction has not proved of much greater value than agglutination reaction in differentiating various strains of streptococci. (2) That conglutination and agglutination reactions are specific for streptococci, but not for different strains of streptococci. (3) that the best extract of streptococci for use as antigen in the complement-fixation test, is dried and washed organisms ground and shaken for 24 hours. (4) That immune bodies specific for different strains of streptococci can be demonstrated by means of complement-fixation test, and it is possible by use of this method we have means of distinguishing specific streptococcus infections.

Teratoma Testis and Its Derivatives.

JAMES EWING. *Journal of Surgery, Gynecology and Obstetrics, March 1911.*

Dr. Ewing considers the historical development of our knowledge of teratomata, tracing the structure and methods of growth. Mention is made of this tumor as early as 1606. The general classification into the solid, malignant, and benign, cystic, forms is considered. Recent work has shown that in the great majority of tumors of the testicle, elements

of the three germ layers can be recognized, which places them under the head of embryomata. Certain of these tumors have great likeness to chorioepithelioma, and Ewing concludes that many of the testicle tumors are in reality chriomatous structures with a one-sided development of the teratoma. He considers the occurrence of pure simple tumors of the testicle in general, and believes that such are comparatively rare. Most of the supposed simple tumors really represent a one-sided development of the teratomata. This view he substantiates by a case which he has studied, to be referred to later.

Most all of the simple benign tumors, of practically all varieties, have been described as occurring in the testicle, including fibroma, chondroma, leio and rhabdo-myoma, adenoma, also malignant tumors of the lympho-sarcoma and spindle cell sarcoma types as well as carcinomata. The early teratoma of the testicle, above referred to, studied by Ewing, shows cartilage, choriomatous structures, squamous epithelium and a diffuse and adeno-carcinoma. This was a small tumor when removed and he believes that if allowed to grow, it would have been regarded, owing to a one-sided development, as a pure carcinoma; the other structures being in relatively small proportion. Ewing mentions the structures occurring in nineteen cases of teratoma testis studied by him. He discusses cases cited in the literature and considers the various theories as to the origin of these teratomata, among the latter, the theories of cell metaplasia, foetal inclusion, partial hermaphroditism, fertilization of polar bodies, and isolated blastomeres and in addition the possible origin of such tumors from the Wolffian body, Muller's duct, or adrenal rests is discussed. From personal study of these cases, Ewing believes that these teratomata arise in the neighborhood of the rete from sex cells whose normal development has been suppressed so that such tumors are offspring and not brothers of the host.

He emphasizes the importance of trauma as an agent in causation of these tumors and cites as analogy, the development of frogs' eggs incited by trauma and other examples from experimental pathology. He believes that the origin of teratomata is related to the development of tumors in general, and is not due to any external parasite, but that the embryonal cells possess more than any others the essential factors in the inception of tumors.

ALBANY MEDICAL ANNALS

Original Communications

ORATION ON MEDICINE.

THE SERVICES OF THE SCIENCES TO RATIONAL MEDICINE.

By HARVEY W. WILEY, M. D.

Washington, D. C.

Mr. President, Dr. Jacobi, and Members of the Medical Society of the State of New York, Ladies and Gentlemen:

We meet to-day in the shadow of a great sorrow for a disaster in which hundreds of human beings have lost their lives. What folly in man to call any product of his handiwork Titanic! The great ship which was the pride of its builders, and the greatest of all its class, collapsed like a paper shell under the impact of its own inertia. And so it is with all great natural forces, man cannot overcome them.

Yet this disaster brings keenly in the foreground the efforts which are making in many quarters of the world to save and prolong human life. The health and welfare of the community are intimately related with religious work, and hence it is fit that this association, devoted to the welfare of man, should convene in a church. The medical profession is devoting all of its efforts to the establishment of health and the prolongation of life.

As it would be the part of wisdom for the navigator to avoid icebergs, because he cannot destroy them, so the medical profession is striving to teach the people of the country to avoid Death, since He cannot be conquered. Fifteen hundred persons lost their lives when the Titanic went down. Hundreds of thousands of American citizens die every year of avoidable disease, yet we hardly think of this appalling disaster to humanity, although we feel most keenly the regretful disaster which sent the Titanic to the bottom.

Gentlemen: Permit me to thank you for the signal honor which you have conferred upon me in asking me to appear before you to-day and deliver the oration on medicine on the

occasion of the annual meeting of your Association. To one engaged in the active profession of medicine an invitation of this kind would indeed have conveyed a great honor but not a surprise. To me, whose activities have been on the border line of medicine and not in active practice, although many years were spent in preparation therefor, the invitation was not only a great honor but a most complete surprise. I am profoundly grateful to my medical brethren of the great State of New York for this mark of their consideration. Modesty forbids me to attribute it to anything other than to a recognition of the work which I have tried to do in the preservation and promotion of the public health. The honor therefore I cannot accept as a personal one but rather as a mark of approbation for the efforts, especially in preventive medicine, which I have endeavored to put forth.

The term medicine may be considered from many points of view. In a very restricted sense it may signify simply a remedy for internal and external use, and indeed this is a signification which is often attached to it; as for instance "take your medicine." But this is entirely too narrow a view to express the deeper and wider signification which the word carries, not only to the profession itself, but also to a large extent to the public. Medicine has been defined as the science and art dealing with the prevention, cure and alleviation of disease, and in a narrower sense, that part of the science and art of restoring and preserving health which is the province of the physician as distinguished from that of the surgeon or obstetrician. It is in the greater sense first named that I shall consider the subject to-day, and I shall regard nothing as foreign to the domain of medicine which tends either to prevent, alleviate or remove disease. A word, however, will not be amiss respecting the dominant influence attached to the term medicine in the still narrower sense as a remedial drug. The physician called to the bedside of a patient who does not "give something" is regarded by the laity, as a rule, as one who either does not know his business or, who knowing it, is afraid to follow the dictates of his conscience and knowledge. On the other hand, the man who is in poor health and who does not "take something" is regarded by most of his fellowmen as neglecting practically the only means by which his health may be restored.

Advancing knowledge in the medical profession, however, has shown that the physician who often gives nothing is perhaps a truer conservator of health than his brother who gives indiscriminately, and further researches in the domain of medicine have shown that the patient who "takes nothing" in the way of drugs is often in a better environment even in so far as the possible restoration of health is concerned than one who fills his system with drugs. I cannot refrain here from contrasting the profession of medicine of to-day with the same profession of a third of a century ago. In fact, my impressions of the medical profession are largely those of a third of a century ago at the time I was trained for its practice. There is nothing which remains so persistently in the memory of man as early impressions, and so I can recall to-day the precepts of my teachers in medicine with greater accuracy than I probably could a lecture I may have heard only a week ago. Thus my impressions of medicine in those, what we may now call benighted days, are extremely vivid, and those impressions lead me to the conclusion that medicine of thirty or forty years ago could hardly be regarded as a scientific profession. The best that could be said of it perhaps is that it was scientific empiricism. It is not wise, however, to compliment our present knowledge too highly. It is barely possible that in another forty years the orator on medicine may look with as much compassion upon the knowledge of to-day as I do upon the learning of that by-gone time. In fact, the most wonderful appeal which is made to the imagination at the present time, in view of the great strides of progress which have been made, is the thought of what lies in the immediate future. As we look back upon the history of the past third of a century we see a steady and systematic progress from the realm of empiricism in medicine towards the realm of scientific reality. The thought also presents itself that, after all, the human organism itself is the best physician, for otherwise how can we conceive of the great number of recoveries that took place in the face of ancient practices? I have heard physicians regret that George Washington, in his last illness, should have been treated by that science of medicine in which calomel and phlebotomy

were the cardinal principles. George Washington died of his attack of pneumonia, but can those who are treating it in a so-called scientific way at the present day boast of much greater success? The conviction thrusts itself upon us, in view of this condition of affairs, that the great and most unfailing source of success in medicine in the future will be with some tolerant and enduring human organism which has resisted the onslaughts of the profession in the past. Men get well under calomel and phlebotomy; men die under antiseptic surgery and scientific medication. Perhaps then the fundamental tenet of medicine to-day is the preservation of the animal resistance in its highest state of perfection as the sovereign remedy against all forms of disease. But it is not my purpose to indulge too extensively on the present occasion in therapeutic animadversions, but rather to trace the effect of the development of the sciences upon the art and science of medicine. Perhaps it may be said that this is an ambitious theme for a single hour, and I acknowledge that this is true; only a volume of hundreds of pages could do justice to this subject, and I hope only to skim along the surface and touch the high points, the *fastigia rerum*, of scientific medicine. It would hardly be fair in speaking of the services of the sciences to leave any of them unmentioned, but I can only speak of some of the more important potent sciences and dismiss the others.

In the case of astronomy it is difficult to say that this science has had any specific influence on scientific medicine, and yet we should not forget that astro-therapy is one of the oldest branches of medicine and the world is yet full of persons who are believers in influences for good or evil of the stars, either singly or in conjunction. The horoscopes which foretell your fortune also often make your vital vicissitudes the venture of vaticination. It is not wise to deny that any of the forces of nature have power for health or disease. When we consider for a moment how the astral bodies act and react with each other to produce the equilibrium which makes the universe stable, we can hardly deny that such a vast source of interacting forces may not have a direct influence on physiological and pathological conditions. The conditions of the sun's surface has often been cited as having influence upon the meteorological conditions of

the earth, and the meteorological conditions of the earth unfortunately have a potent influence on health. Hence we may admit that it is possible that a new outburst of spots on the sun may increase or decrease the number of invalids upon the earth's surface. It is not my purpose to trace any scientific connection between the solar phenomena and mundane health, nor could I if I so desired. I need, however, only to call your attention to the fact that the sequence of the seasons, the storms, and droughts, and breezes, the hurricanes, the tides and the waves, are wholly dominated by stellar forces, the sun itself being the most potent star. The sun, however, is only an atom in the stellar universe, and the influence of even a star as distant as Sirius may not be wholly unmeasurable.

With perhaps the exception of chemistry astronomy is the most exact of the sciences, and yet its laws are only partially known, and it remains for future investigators to determine the extent of *helic* and *astral* phenomena upon health and medicine. I, for one, am of the opinion that the influences of the vast systems of worlds upon each particular world are dominant and eternal. The difficulty which we encounter is in estimating the particular kinds of forces, and their particular effects upon each particular atom in the cosmic molecule.

Closely allied with the physical cosmos is the science of physics itself, which has of late years undergone such wonderful development. It is rather difficult to distinguish the dividing line between physics and chemistry, but in speaking of the effect of this science on medicine a transgression of the boundaries between the two sciences must be permitted. The most prominent features, however, of physical science to which attention should be called are those of late development. The existence of forms of radiant matter, of intense activity is only a recent discovery. As is usually the case the newly discovered powers are exploited as a fresh gold mine would be, and more importance is attached to the value of phenomena of this kind by reason of their newness than is probably their due. So the discoveries in the domains of physics bordering on chemistry of the Roentgen rays, of radiant matter, of colorless light, of the supposed ions and electrons of the physical world have probably been magnified beyond natural proportions. I need only call

your attention to the supposed utility of the radiant forms of matter for alleviating certain difficult diseases such as cancer and allied troubles. By means of the Roentgen rays, however, important contributions have been made to that branch of medicine which is known as diagnosis. Radiographs of the body reveal in the first place, deformities, fractures, dislocations, and in the second place give a picture of the internal organs which is more or less valuable for diagnostic purposes. Electric light has been used to illuminate many of the cavities of the body before invisible, and by the use of the electric light which may be introduced into the cavities of the body various derangements of the organs may be ascertained. Hence the utility of this branch of physical science to medicine is not easily overestimated. Closely associated with this idea is the tremendous power of radiant matter, especially that which emanates directly from radium and its compounds upon the living organism. Numerous instances of serious, and even dangerous, injury have been reported from the careless employment of the salts of radium. Too much praise has doubtless been given to their curative properties, and we are a long way from having scientifically demonstrated just to what extent the Roentgen rays and radiant emanations may prove beneficial, and in what particular forms they may be harmful. But little, however, has been done to show the tremendous importance of these hitherto unknown factors of matter and hence we may say from this brief sketch that the evolution of physics in the borderland of chemistry has had a tremendous influence upon medicine.

The science of botany has always been of pronounced value to medicine by reason of the fact that many of the weapons in the medical arsenal are furnished by plants. For this reason the advancing knowledge of plant life, of the discovery of new species and of the modification of old ones are all matters that bear directly upon medicine. Vegetable preparations have been valued from the earliest times for their medicinal properties, and those of wild growth have been specially sought in all quarters of the earth and used most extensively for medical purposes. Even before the science of botany was known the principal preparations which were supposed to be efficacious in the alleviation of disease were made from plants. In the last few years, how-

ever, a systematic attempt has been made to render the science of botany more effective in the province of medicine. This has been especially seen in the attempt which has been made to introduce medicinal plants into this country, an attempt which has been prosecuted with vigor and some success by the Department of Agriculture. It will be interesting to note the effects which are produced upon the composition of these vegetable drugs by reason of the artificial conditions in which they have been grown. It has been found that the environment makes a profound impression upon the activity and the quantity of the remedial constituents of plants, sometimes increasing an active constituent, but usually decreasing it. Thus acclimatization of plants of supposed medicinal qualities may result in the practical elimination of these medicinal qualities from the plant itself, and the tendency is certainly towards elimination, rather than towards increase, although it must be said that the experiments have not been carried on long enough to warrant positively the assertion that the acclimatization of wild plants tends to reduce the vitality and quality of the remedial substance contained therein. In general it may be said that when savage plants are brought under culture some radical change in their constitution may be expected. Many of them simply refuse to grow at first, though perhaps by persistent efforts all wild plants might be domesticated. The contributions to the armament of *materia medica* which may be expected from the domestication of wild plants cannot be foretold. All that can be stated positively now is that efforts are making but results are not abundant. The service of botany in contributing so many valuable remedies for the use of the physician cannot, however, be too highly estimated. Botany itself, like other sciences, has undergone rapid mutations, and it now embraces wide fields of study and research aside from the mere study and analyses of plants. In fact botany has come to be known as the name of a group of sciences working upon plants rather than as a means of describing, classifying, and naming plants themselves. Among the other sciences which have been thus incorporated more or less in the service of botany are chemistry, physics, heredity, and kindred fields of study.

That science which furthered medicine the most of all, and it is an exact science, is chemistry. Not only has it been active in connection with the service of botany, but it has been intimately related to diagnosis and therapeutics. The physician has gradually come to learn that the human body is an engine made up of various correlated parts, fed by fuel, and regulated by automatic oiling and control. He has found out that each of its functions is performed under an immutable law and that the whole is governed rigidly by the principles of thermodynamics. Having learned the true nature of the organism, his attitude toward that organism has, of necessity, undergone a profound change and the chemical laws which underlie the beginnings of life, the embryonic stages of the living being, its growth and its maturity, have widened the field of medical knowledge and broadened the view of the medical practice. Attention need only be called to the investigations of Loeb and his school to show how profoundly the first beginnings of life may be modified by a change in the chemical environment. It is true that the sea urchin is far removed from the human being, but it is likewise true that the laws of growth which condition the existence of the sea urchin are the same as those which obtain for the most highly organized man. In so far as I know an actual living being, in the ordinary sense of that word—that is a being capable of self perpetuation and of transmitting life to other beings—has not been even approached, but much progress has been made towards solving the riddle of life by a keener sense of the relations of chemical science to the so-called vital phenomena. The best service which these investigations has rendered has been clearly to point out that the supposed existence of some element of vital energy in the living being which does not exist in other matter is a myth. The laws which govern the formation of the crystal, the accretions of the stone, the growth of a mineral, the segregation of material in solution into a mass of similar chemical structure, are no less vital and mysterious than the action which produces a plant or a seed, an animal or an egg. The laws which determine the motion of the bodies in solution and even of solid bodies within each other and through each other, are found to be simple principles of physical chemistry, and not to depend upon any unknown or

undiscovered cause. While this is all true we cannot fail to acknowledge that life and growth are just as much a mystery as they were before. We have only learned to recognize some of the laws which control them; we have gained no knowledge in regard to their ultimate source and destiny. Nevertheless, I would by no means consider it an idle expenditure of time and talent still further to pursue by chemical means the search for organized life in chemical activities. We know that all the phenomena of growth and decay are purely chemical and hence we would not be justified in denying that the very origin of life must have been due to a happy taxis of stray elements. The fact that man has never been able himself to produce such an arrangement only emphasizes the shallowness of his knowledge and not the impossibilities of the problem. Chemistry having shown its close relationship to the origin and proper progress of life, has also revealed the nature of the chemical changes which take place in normal activities of the living cell, or aggregate of cells. This normal function itself is the basis of physiology, but the detection and control of the phenomena and their quantitative measurement are strictly chemical. It is, therefore, impossible to separate chemistry from physiology. While chemistry would exist and be a great science without physiology, rational physiology without chemistry would be largely a building of terms. Those intricate workings, and interworkings, of osmotic pressure due to differences in saline content and to the relations of these different solutions to the cell walls separating them, form the fundamental condition of a large part of the activity of the living being, whether plant or animal. It cannot be denied, therefore, that chemistry has wonderfully expanded our knowledge of physiology and thus proved a most valuable contribution to the science of medicine. A few years ago there were many organs in the body whose functions were not understood, and therefore there was no known physiology for these organs but the progress of chemistry applied to physiology has gradually shown that these organs are not mere accidents of the living organism but that they have distinct and useful functions resulting in the production and distribution of different chemical compounds. We now know what comes of the activity of the thyroid, the adrenal,

and other glands. We now know, thanks to the expansion of physiological chemistry, that no organ of the body performs its functions in an independent manner, but that certain messengers go from gland to gland and from one part of the body to another arranging and adjusting the *modus vivendi*. The hormones are the chemical peacemakers and the walking delegates of the body, bringing into harmonious relations its various organs and their activities and preserving and uniting a compact unit working to a definite purpose. But I can only touch upon these wonderful accomplishments of physiological chemistry in the hour at my disposal. I must pass on to some other considerations.

While medicine is not directly interested in the morphology of bacteria this branch of botanical investigation is of deepest interest to scientific therapy. Infection, asepsis, and antisepsis are studies of supreme importance and they can not be fully mastered without some knowledge of bacteriology. But the chief interest in this study centers in what do these organisms do? The answer brings them well within the domains of chemistry. These tiny plantlets promote health and growth and condition disease and decay. Not only in surgery but in vaccine or serum therapy the rôle they play is of the highest significance. In prophylaxis bacteriology is one of the most useful sciences that the physician has at his command.

The science of microscopy has been an immeasurable aid in the applications of chemistry to medicine. That which brings into view the unseen cannot fail to add to the sum of human knowledge. Even though the science of optics itself, which is the basis of microscopical research, can apparently have no direct relations to medicine, microscopy would have failed largely of its purpose had it not been working hand in hand with chemistry. It was a happy discovery, therefore, that certain organisms were capable of absorbing and retaining definite coloring materials which seem to have only slight if any affinity for other organisms or organic tissues which may be present. The staining of microscopic objects, which is an application of tinctorial chemistry, has raised the microscope from a mere implement of optical skill to one of the most powerful means of studying the most intimate phenomena of life. This has been

particularly illustrated in the microscopical study of bacteria. Bacteria are supposed to be of a vegetable nature, though in the present condition of advancing science I fail to discover any particular test which separates living bodies into animal and vegetable. Be that as it may, these organisms have a remarkable faculty of being susceptible to particular stains and thus being brought into prominence in the microscopic field by reason of the color which they carry. When it is once ascertained that a particular organism is colored by a particular stain, the means of identifying that organism among its fellows is at once provided. In a further application of this principle the question arises as to whether there might not be pathological organisms of a virulent type other than the bacteria which have already been mentioned which may not only absorb a particular color but also a particular and specific poison. If such should be found to be the case, a poison which was specifically active for such a pathogenic organism might be safely used within bounds for its destruction without producing any general toxic effects. The application of this principle of chemistry has led to investigations of various chemical compounds which are poisons in themselves or which contain a poison with the hope of finding some one of them with the specific properties above mentioned. We are all aware of the fact that some such discoveries have already been made, for example a certain preparation containing arsenic has been found to be useful in destroying the life of the organisms producing syphilis. Just how far Ehrlich may have been influenced in the search for this remedy by the facts I have mentioned concerning the staining of bacteria for microscopic examination I am not able to say. It is, however, such a logical sequence to step from the investigation on specific stains to the other one on specific poisons that it seems to me the first must have led to the second. In this connection a prophecy may perhaps be permitted, which is not offered as a certainty but as a hope only, and prophets are wise when they place the fulfillment of their predictions at a period when they themselves are likely to have finished their earthly course. I venture to prophesy, therefore, that within perhaps a quarter of a century that which has been already accomplished for syphilis may also be achieved for cancer? Cancer is the one

sinister disease which holds us in constant fear, which has not yielded to the progress of scientific medicine the secrets of its existence and transmission. Though the experimental work concerning the origin, nature, and prognostication of cancer is going on in several centers of the world in such a splendid way we are still working to a certain extent in the dark. It will indeed be a glad day for the world when the scientific investigator in medicine adds this long desired victory to those which have gone before in the realm of chemical accomplishment.

But chemistry does more than seek new remedies, thousands of which it has already offered to the medical profession, many of which have stood the test of the pharmacologist and the physician. While physiology has been defined as the sum of the chemical reactions of the healthy organ giving definite chemical products, pathology, which is the deformed sister of physiology, is no less subject to chemical dicta, and it has been found that the abnormal exercise of functions gives rise to abnormalities in the chemical products of the organs. Hence chemistry has been practiced with a view of throwing light upon pathological changes, and in this field it has worked with equal success. While some of the excretions of the body have been under examination for many years as an index of pathological changes, it is only within a short time that the physician has realized the supreme necessity of a thorough study of all the excretions of his patient. The urine is not the only one although perhaps the most important. The examination of the feces, the sputum, the perspiration, and of the other excreta are all valuable indices to the nature of the pathological changes going on. The chemical laboratory, therefore, has become an indispensable adjunct to the clinic and to the physician's office, and the data obtained therein have been widely increased over those obtained by the old simple examinations of a quarter of a century ago. Thus chemical control has at last begun to throw light upon the processes of metabolism which are so woefully disturbed by pathological changes. The nutrition of the physiological unit is a question of the utmost importance, but by reason of the toleration of the living body to wide changes of environment, slight disturbances of nutrition in a healthy person are borne by the system. With a pathological condition of the patient the normal

functions are deranged or disturbed and hence the normal principles of nutrition which would be a guide in a state of health can not possibly be applied in their entirety in a state of disease. The physician, therefore, to meet this exigency must realize that in the future he will be expected to be a master of the principles of diet and nutrition and not merely the empirical enunciator of what his patient shall and shall not eat, which he too often is to-day. I have frequently wondered what the result would be if a dozen of the most eminent specialists in diseases of the digestive organs were to examine the same patient as nearly as possible at the same time and then to prescribe for him a diet which they supposed would be useful in the conditions presented. A list of the dietaries thus suggested would be without doubt a most interesting contribution not, I will say, to medical science but to medical vagary. The science of chemistry offers itself to the science of medicine in these intricacies of the way, as a useful helper, and sometimes as a guide.

Atwater and his assistants (and among these Benedict especially who has shown how by the exact measure of bodily heat and the products of combustion the laws of thermodynamics are rigidly applicable to the phenomena of metabolism) have done much to place the study of nutrition on a strictly scientific basis. The vital functions, so-called, are found to be simple chemical phenomena which arrange themselves in complete order in luminous schedules.

Benedict has lately employed the calorimeter in the study of disordered metabolism and especially that form of derangement in which carbohydrates escape destruction. There is hope that by such studies the empiricism of the present theories of nutrition in diabetes may be replaced by a fundamental theory of diet. The increasing mortality due to nephritis, diabetes, and Bright's disease should be checked as the results of such researches.

Pharmacology is a science which must not be neglected in this brief review because, with all its shortcomings and with all the strained conditions in which this science is practiced, we cannot deny the useful position of guide and adviser which it has filled with such distinction. It is true that the direct introduction of drugs into the living body is likely to be attended

with variations from the ordinary method of exhibiting them which may be of a distinct and even serious nature. But we cannot deny, on the other hand, that the real effect of the drug is that which is produced by the drug itself, and directly, and not by the drug as modified by admixture with the food and subsequent consumption. The ultimate tendency in both cases is, it seems to me, the same, but there is a possibility of delayed action by the administration of the drug with the food, so that it would require a very much longer period of observation to determine its real effect than would otherwise be the case. Pharmacology will at least reveal the nature of the most powerful drugs—those that threaten very serious change of function or even health and life, and hence its practice could not be suspended without a most serious blow to the progress of scientific medicine. At the same time we should not forget that all searches for truth should be made with as little disturbance and discomfort as possible, and hence the animals which are used, particularly for pharmacological studies, should be humanely treated and by the use of proper anaesthetics be saved from any conscious pain or suffering. I need not stop here to give even an outline of the great contributions which pharmacology has offered. One need only open the catalogues of manufacturers of synthetics for instance to see the wonderful progress which has been made. Perhaps there is some element of danger in this too prolific science, namely the encouragement of the physicians to use drugs to a larger extent than they otherwise would. Drugging is a dangerous practice as every wise physician knows and hence we should not yield to the insistent demand of advertisements to “give it a trial.” The profession should wait, and wait patiently, for the chemical, pharmacological, and physiological effects of each proposed remedy to be thoroughly studied and its virtues uncontestedably shown before becoming experimenters themselves on the bodies of their patients.

I could not leave this theme without calling attention to some of the wonderful accomplishments of other sciences in their applications to medicine. The studies into the causes of immunity from disease have been epoch-making in the last quarter of a century. If Jenner could have lived to see that his dis-

covery of the application of the virus of smallpox was to be justified by the most rigid investigations it would undoubtedly have been the proudest day of his life. The whole theory of immunity has been taken out of the realm of pure empiricism and placed upon the rock of scientific truth. The fact that the system when infected, immediately sets about the production of an anti-body to neutralize the poison, to my mind, is one of the greatest scientific discoveries which has come into the medical world. Based upon the search for sera, which, by injection, can produce, and this before the disease has had a chance to establish itself, a condition of immunity by the artificial production of anti-bodies, a method of establishing immunity has been devised,—is a fact of the highest significance. Coupled with this should be mentioned the discovery that the healthy, well-nourished individual has a power of resistance to infection which is marvelous, and even if we should not succeed in exterminating the sources of infection entirely we may make the human race so immune to its ravages of infectious diseases as to render their effects upon the death rate negligible. In this connection the discovery of Wright that the power of resistance of the body rises and falls, and that the leucocyte which is active in this matter does not always have the same ability to destroy intruding organisms, has been a step forward of the greatest significance. That the condition of the blood may be so modified as either to increase the activity of the phagocytes on the one hand, or to diminish the resisting power of the intruding organism on the other, is a fact of great promise to the future of the profession. While it is true that the original method of determining the opsonic index is laborious and complicated, the process has already been simplified by Crane and others so as to give promise of being a workable method at the bedside. Fortunately there is no creed or doctrine to which the true physician must subscribe. The science of medicine does not know the name of any school that the true physician can bear if it restricts the activities of investigation or the belief. The introduction of scientific methods into medicine has shown that in practically every so-called school of medicine there is some kernel of truth which may be valuable to the physician, but which has been used beyond its natural limit of application.

by the school in question, so as to reduce it to absurdity. All that is good in all the schools or creeds belongs to the science of medicine. Many of the so-called schools are only branches of medicine as it is practised to-day, and this is true of psychotherapy, of hydropathy, of electro-therapy, of bromato-therapy and of radio-therapy. There are other so-called schools of medicine, such as allopathy, homeopathy, osteopathy, et cetera, which are of a character to defy accurate description. One of the chief objections to such creeds is that they narrow the limit of medicine to such an extent that there is no room for expansion without transgressing the creed. It is with medicine as with religion, creeds restrict and restrain. They breed distrust and denunciation. They incite prejudice and battle. They doubtless are useful because they make people think and consider, and every discussion of every problem leads gradually to the elimination of error and the establishment of truth. How narrow seems the path that is bounded by creeds and theories of this description! Science has erected a huge monument, from the pinnacle of which the true physician surveys the whole world and gathers all that is good from all that comes within his vision. Meanwhile he finds that for the purposes of his profession, for the enlargement of his vision, for the increased power of his armament, he must rely more and more upon the fundamental sciences which furnish the foundations of medicine. Anatomy, physiology, pathology, botany, chemistry, microscopy, bacteriology, physics, pharmacology, nutrition and diagnosis are the fundamental sciences on which his art must be built. Only those who are grounded in these sciences, and who believe in them, and who are guided by them, can with safety and with proficiency study their art, and thus become true benefactors of mankind.

THE ANATOMY OF THE HUMAN HEART.

*Read before the Medical Society of the County of Albany, November
14, 1911.*

By NELSON K. FROMM, M. D.

It is not unlike carrying coals to Newcastle, making an attempt to describe to a gathering of physicians, the anatomy of the heart, an organ so frequently diseased, and under treatment;

but perhaps a few of us have forgotten some of the details, and it may not be amiss to freshen our memories concerning this interesting organ. This is my only excuse for taking your time this evening.

The pericardium is a conical membranous sac containing the heart and roots of the great vessels. It is composed of an outer fibrous coat and an inner serous one. The fibrous is prolonged over the outer surfaces of the great vessels, while the inner consists of a parietal and a visceral layer, the latter being reflected over the heart and vessels. The pericardial fluid secreted for lubrication, is about one drachm in quantity normally.

The endocardium is a thin membrane lining the internal surface of the organ. It assists in forming the valves by its reduplication and is continuous with the lining membranes of the great vessels. It is thicker in the auricles than in the ventricles and thickest in the left ventricle.

The muscular fibres forming the heart, take their origin from four fibrous rings at the auriculo-ventricular and aortic openings. Fibres of the auricles are arranged in two layers, a superficial and a deep. In the ventricles the fibres are also superficial and deep, the latter being arranged circularly, the former spirally, coiling inward at the apex into a whorl-like form, the vortex. Histologically, the muscular fibres differ from other muscular tissue in that they are smaller by one-third and their transverse striations are more indistinct. The fibres are made up of quadrangular cells joined end to end; their extremities have a tendency to branch or divide, the sub-divisions uniting with offsets from other cells, producing an anastomosis.

Right Heart.—The right auricle is slightly larger than the left, and its walls somewhat thinner, being about one-twelfth of an inch in thickness. It consists of two parts, a principal cavity, the sinus venosus or atrium, situated posteriorly and a smaller portion, the auricular appendix, situated anteriorly. It receives the venous blood by the superior and inferior venae cavae and the coronary sinus. Some of the more important points of interest in connection with the right auricle are: the auriculo-ventricular opening, which communicates with the right ventricle, is oval, about one and one-half inches broad, surrounded by a fibrous ring and is guarded by the tricuspid

valve. The Eustachian valve at the anterior margin of the inferior vena cava, large in foetus, to direct the blood to the foramen ovale. The fossa ovalis, a depression on the inner wall of the auricle, corresponding to the situation of the foramen ovale in the foetus.

The right ventricle is triangular in form and extends from the right auricle to near the apex of the heart. Its anterior surface is rounded, convex and forms a large part of the anterior surface of the heart. Its under surface is flattened and rests upon the roof of the diaphragm. The walls of the right ventricle are thinner than those of the left, the proportion between them being as one to three. The cavity equals in size that of the left ventricle and is capable of containing from three to four fluid ounces.

There are two openings in the ventricle, the auriculo-ventricular orifice and the opening of the pulmonary artery. The auriculo-ventricular orifice is situated at the base of the ventricle, is about an inch and one-half in diameter, and surrounded by a fibrous ring. It is considerably larger than the corresponding aperture on the left side, being sufficient to admit the ends of four fingers. It is guarded by the tricuspid valve. The opening of the pulmonary artery at the superior and internal angle of the ventricle, is guarded by the pulmonary semilunar valves.

The tricuspid valve consists of three segments of a triangular shape, formed by a duplicature of the lining membrane of the heart, strengthened by a layer of fibrous tissue. These segments are connected by their bases to the fibrous ring surrounding the auriculo-ventricular orifice and by their sides with one another, forming a continuous annular membrane which is attached round the margin of the auriculo-ventricular opening, their free margins and ventricular surfaces affording attachment to a number of tendinous cords, the chordae tendineae. These are attached to rounded muscular columns, the papillary muscles, which project from the walls of the ventricle.

The semilunar valves are three in number and guard the orifice of the pulmonary artery. They are attached by their convex margins to the wall of the artery at its junction with the ventricle, the straight border directed upward into the lumen of the

vessel. Each segment about the middle of its free margin has a fibro-cartilaginous nodule, the corpus aurantii, which more perfectly closes the orifice.

The Left Heart.—The left auricle is somewhat smaller than the right but its walls are thicker, being about one-eighth of an inch. Like the right auricle it consists of two parts, a principal cavity or sinus and an auricular appendix. The four pulmonary veins, which open into the auricle, frequently terminate by a common opening and are not provided with valves.

The left ventricle, the most important chamber of the heart, is longer, thicker and more conical in shape than the right; it forms a smaller part of the anterior cardiac aspect but a considerable portion of its posterior surface. It also forms the apex by its projection beyond the right ventricle. Its walls are three times as thick as those of the corresponding chambers on the opposite side. The two openings are the auriculo-ventricular and the aortic, the former being guarded by the mitral valve and the latter by the aortic semilunar.

The mitral valve is placed similarly to the tricuspid, has two cusps instead of three, and is larger, thicker and altogether stronger than its neighbor. The semilunar valves guarding the aorta are likewise larger than their analogues of the opposite side.

The muscular tissue of the heart is nourished by the coronary arteries, two in number, a right and left. The right runs between the pulmonary artery and the right auricular appendix obliquely to the right side, divides into two branches which at the apex anastomose with branches of the left coronary. The left coronary supplies the left auricle and its appendix, and gives branches to both ventricles. The nervous energy of the heart is derived from the cardiac plexuses which have their origin partly in the cranial and partly in the sympathetic systems.

The principal peculiarities in the foetal heart are: the direct communications between the two auricles through the foramen ovale and the large size of the Eustachian valve. The foramen is situated at the lower and back part of the auricular septum, forming a communication between the auricles. It remains as a free opening until the middle period of foetal life.

About this period a fold grows up from the posterior wall of the auricle, allowing the blood to pass only from the right to the left auricle and not in the opposite direction.

The Eustachian valve is directed upward at the opening of the inferior vena cava, its function being to direct the blood of this vessel through the foramen ovale into the left auricle. The foramen ovale becomes gradually closed by about the tenth day after birth, the valvular fold above described becomes adherent to the margins of the foramen for the greater part of its circumference, but above a slit-like opening is left between the two auricles which sometimes remains persistent.

(*Abstracted from Piersol, Gray and Potter*)

ON THE PATHOLOGY OF THE HEART.

*Read before the Medical Society of the County of Albany,
November 14, 1911.*

BY HARRY S. BERNSTEIN, M. D.,
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Gentlemen.—It gives me pleasure to present to you a summary of pericardial and cardiac conditions, encountered in three hundred and nine autopsies which have been performed by the staff of the Bender Hygienic Laboratory from October 4, 1908, to the present time. The findings are based on the gross evidence, excepting in several instances in which the diagnosis was established by microscopic examination. One hundred and fifty hearts showed no lesions.

In fifty-nine, the pericardial sac was involved, and these may be divided as follows:—

Haemopericardium	3
Hydropericardium	15
Acute pericarditis with effusion.....	7
Primary tuberculosis	1
Infiltration with malignant disease.....	2
Maculae tendineae, the so-called "milk patches".....	21
Chronic adhesive pericarditis.....	9
Fibrous nodules, the "Nodes of Knox".....	1

The pneumococcus *lanceolatus* was found in four of the acute cases, and the types of malignancy were that of the lymphocytoma and carcinoma. It is noteworthy that of the nine cases of chronic adhesive pericarditis, one was associated with a subacute and chronic peritonitis, six were free from ascites, and one case only contained about 50 c. c. of fluid within the peritoneal cavity. The accumulation of fluid in the abnormal cavity, together with symptoms of cardiac failure, is regarded as suggestive of an adherent pericardium. The ascites is explained by an interference with the portal circulation because of extension of the inflammatory process through the diaphragm to the capsule of the liver. Four of the eight cases, however, showed no perihepatitis, and yet two of the cases with perihepatitis were similarly free from ascites.

One case of stab wound of the auricle and one case of rupture of the heart complete the traumatic list. In eleven hearts, there was evidence of congenital maldevelopment. A patent foramen ovale was found in seven. A patent foramen ovale and ductus arterioses in three and one case of patent foramen co-existed with an interventricular septum. These cases of maldevelopment ranged in age from that of the still-born infant to six months. One female, however, with a patent foramen was aged forty-one years at time of death. The myocardium was involved in seventy-seven cases, and according to lesion, the following tabulation is made:—

Acute dilatation	7
Hypertrophy	21
Brown atrophy	5
Infiltration with tumor.....	4
Acute and chronic myocarditis.....	2
Chronic fibrous myocarditis.....	22
Excessive epicardial fat	4
Intracardiac petechiae	10
Thrombosis	2

Now, of the twenty-one hypertrophied hearts, six were associated with kidney lesions, five with valvular lesions, four with an obliterated pericarditis, two with coronary sclerosis, two with a myocarditis, and one with a congenital malformation. One

heart showed right-sided hypertrophy, as a result of an extensive atelectasis of the lungs following a kyphosis. The cases in which brown atrophy occurred had a minimum age of fifty years, and a maximum age of ninety-one years. The types of tumor that metastasized to the heart were lymphosarcoma, carcinoma, chloroma, and a round cell sarcoma. The latter was secondary to a growth in the thymus gland. Of the cases of infectious myocarditis, one was due to the *staphylococcus pyogenes aureus* which came from a septic uterus. Eight of the ten hearts showing subendocardial ecchymoses were of infectious origin, and the remaining two were consequent upon blood diseases, namely, lymphatic leukaemia, and purpura hemorrhagica. Thrombosis occurred in the case of infectious myocarditis and in a case of myelogenous leukaemia.

Twenty-five hearts showed evidence of endocardial changes. These varied from a slight opacity of the endocardium or localized thickenings to calcareous deposits. The mitral valve showed degenerative changes in twenty-one cases, with calcified plaques in three of them; the aortic valve in eighteen with calcification in three; the tricuspid valve in one. The mitral and aortic valves were together involved in twenty-eight cases, with calcification in six; the mitral and tricuspid in two; the mitral, aortic, and tricuspid in two; and all four valves in three cases.

Malignant endocarditis occurred in eleven cases. The mitral valve showed vegetation in three cases, the aortic valve in two; combined mitral and aortic valves in three; the mitral and tricuspid valves in two; the aortic, mitral and pulmonic valves in one case. The last mentioned case is noteworthy, for the endocardial infection came on during the course of an articular rheumatism. From the vegetations on the valves, from the fluid of a knee joint, and from the heart's blood, a Gram positive encapsulated diplococcus was isolated, morphologically consistent with *streptococcus capsulatus*.

In only three hearts, however, were the end results of endocardial infections seen. These included one case of mitral stenosis and one of aortic stenosis. Fenestration of the aortic cusps was encountered three times.

In four hearts, there were scattered along the margins of the valves, on the chordae tendineae and between them, small cir-

circumscribed, elevated pinpoint areas closely simulating early vegetations. They differed from vegetations, however, in that they were firm and very adherent. In smear preparations, no pus cells or organisms were seen. Histologically, they were composed of connective tissue. In one of these cases, about fifty years of age, there were in addition, soft greyish projections averaging 0.5 cm. in length, situated on the margin of the aortic and mitral valves and extending into the ventricular cavities. Apparently these fibrous strands and nodules represented organized masses of fibrin which had been removed from the circulating blood.

A percentage summary of the three hundred and nine hearts reviewed is as follows:—

Hearts negative in gross.....	48.5 per cent
Pericardial involvement.....	19.0 per cent
Trauma of heart	0.6 per cent
Congenital malformation	3.5 per cent
Myocardial lesions	24.9 per cent
Degenerative changes of the endocardium.....	24.5 per cent
Malignant endocarditis	3.5 per cent
Healed endocarditis	0.9 per cent
Organized fibrin on valves.....	1.2 per cent

The following slides and specimens are demonstrated as typical of the pathological processes under consideration:—

Bender Laboratory, No. K-11-21—Autopsy performed by Dr. Ordway. Hypertrophied heart with adherent pericardium, weighing 840 grams. This specimen came from a male, sixty years of age, who died suddenly one or two hours after a "heavy meal." The pericardium is firmly adherent to the tip of the left ventricle. The apex of the left ventricle shows a more or less circumscribed hemispherical bulging, and to this externally the parietal pericardium is firmly adherent. This portion of the ventricular wall is composed of fibrous tissue. The cavity of the ventricle is much enlarged.

K-11-29—Portion of heart and adjacent pericardium. Autopsy performed by Dr. Ordway. The pericardial cavity was entirely obliterated by firm adhesions. On tearing the adhesions apart, both parietal and visceral surfaces were seen to be studded everywhere with myriads of small greyish and yellowish tubercles. The case at death was fifty-eight years of age. During life, the patient showed gradual emaciation and a high pulse rate. There was no other focus of tuberculosis found.

K-10-64—Heart and portion of pericardium showing acute fibrinous pericarditis and acute aortic endocarditis. The parietal and visceral layers are everywhere covered with a greenish yellow, elastic material, forming a coarse meshwork; and attached to two cusps of the aortic valve is a cauliflower-like mass of yellowish color and soft consistence.

A-11-38—Microscopic section of heart and pericardium. In the gross, the pericardium of both aspects of the heart was markedly thickened, varying from 0.8 cm. to 1 cm. in width. The consistence was that of parchment. The connective and fat tissue of the pericardium is everywhere infiltrated with tumor cells which show a glandular and occasionally a columnar arrangement. Some of the blood vessels have the lumina almost occluded by the tumor cells. In places also, the muscle fibres of the heart are atrophied and are similarly invaded by the growth. In this case there was primary carcinoma of the right adrenal gland with metastases to the lungs and pericardium.

K-10-29—Portion of heart, showing patent foramen ovale in an adult. There are three ovoid openings, the largest measuring 1.5 cm. in its greatest length, broadening upon the fossa ovalis. Closely adjacent to these are four circular openings, of average diameter of 3 mm.

K-11-11—Heart of an infant, eight months old, showing patent foramen ovale and interventricular septum. The weight of the heart is eighty grams. The foramen ovale is divided into two ovoid openings, six mm. in greatest length, by a thin strip of fibrous tissue. Below the right coronary cusp of the aortic valve there is a circular opening 7 mm. in diameter, which communicates directly with the cavity of the right ventricle. The aortic flap of the mitral valve finds attachment to the periphery of this septum. The heart was so greatly hypertrophied that it caused the lower portion of the gladiolus and ensiform cartilage to protrude forward, producing a dome-like eminence of the chest. The case was never a "blue baby." Enlarged tonsils and adenoids were responsible for difficulty in breathing. A pneumonia proved fatal.

K-10-167—Heart showing marked right-sided hypertrophy as the result of a pulmonary stenosis. The pulmonic valve is represented by a ring, one-quarter of an inch in diameter. The case lived to the age of twenty-seven years. Dr. Hun has already described this specimen in great detail.*

K-11-40—Autopsy performed by Drs. Ordway and Ayer. Heart showing moderate hypertrophy and mitral stenosis. The mitral valve is seen as a small button-hole-like opening 2.5 cm. in length. The mitral curtains are rigid, granular, and thickened, and contain abundant hard deposit, apparently lime.

K-10-78—Autopsy performed by Dr. Ordway. Hypertrophy of heart and aortic stenosis, and insufficiency. The weight of the heart is 960 grams. The cavity of the left ventricle is markedly dilated. The cusps of the aortic valve are entirely calcified, so that the normal contour is

*HUN, II.—A Case of Congenital Stenosis of the Pulmonary Orifice and of the Conus Arteriosus. Albany Medical Annals, Vol. XVIII, No. 2, Feb., 1897.

missing. The calcified ring in the position of the aortic valve extends outward like a circular shelf, occluding the lumen which is represented by an irregular opening 0.4×0.7 cm. This case was fifty years of age at time of death. No history is obtainable other than that marked dyspnoea has been the leading symptom.

K-11-24—Heart showing nodule of carcinoma. Imbedded within the anterior wall of the right ventricle there is a whitish multinodular mass, projecting within the cavity and causing also a marked bulging of the pericardial surface. The mass measures 2.5 cm. x 2 cm. This case was fifty years of age who had had a hysterectomy done for carcinoma. Six weeks later there was a recurrence of the condition in the scar and urethra. Death followed in eleven weeks; so that four months after the hysterectomy, and sixteen months after the onset of symptoms, the entire pelvic cavity was filled with a malignant growth that had metastasized to the abdominal wall, lungs, liver, pancreas, heart, and kidneys. The noteworthy feature of the case is the conveyance of the carcinomatous growth to other parts by the blood stream.

My thanks are due Drs. Gorham, Hun, Sampson and Vander Veer for clinical notes.

THE TREATMENT OF DISEASES OF THE HEART.

Read before the Medical Society of the County of Albany, November 14, 1911.

BY SAMUEL B. WARD, M. D.

Mr. President and Gentlemen of the Albany County Medical Society:

Some time ago your good President asked me if I would join in this evening's symposium, taking for my share the "treatment" of diseases of the heart, and limiting myself to fifteen minutes. I asked if he wished me to touch upon all the forms of disease of this organ, and he said "yes." It is clear therefore that thorough discussion of any one of them is out of the question and I can only skim over the surface of each. I know that I am safe in assuming that you are all familiar with what the textbooks say about them, and shall only mention those measures which, in my hands, have seemed to give the best results.

In "*acute pericarditis*" rest in bed should be insisted on absolutely. For the first few days, either heat or cold should be applied to the precordial region, whichever is more grateful to the patient. Later on, I cannot too strongly recommend the repeated application of small fly blisters. I can confidently say,

that they have never failed to prove of benefit. If effusion occurs they aid materially in procuring reabsorption, while, of course, diuretics and diaphoretics should not be neglected.

In "*chronic pericarditis*" blisters have proved quite as important as in the acute disease; and iodine internally, in some form seems indispensable.

In "*acute endocarditis*" I am well aware that text-books generally do not recommend repeated application of small blisters; but I am sure I have seen them prove of great benefit in many cases. I recall having seen with Dr. Steenburg, in 1895, a young man, 34 years of age, who was so ill that for days orthopnoea was extreme and his life was despaired of. Repeated small blisters formed an important part of the treatment, although the usual internal treatment was also resorted to. The last time that I saw him during this attack there was still a systolic, blowing murmur at the apex, although he had no shortness of breath or other rational symptoms. I had an opportunity of examining his heart again in 1910. He told me that he had enjoyed excellent health ever since that illness and that in 1904 he was always at the head of a party of three who had climbed two mountains in Colorado, reaching an altitude of over 14,000 feet. There is no claim that blisters alone will secure this result in every case; but they have certainly seemed to give valuable aid.

In "*malignant endocarditis*" or "*acute ulcerative endocarditis*," I know of no specific, or even any line of treatment that gives satisfactory results. In May, 1903, I read before this society, a paper on this subject in which I gave the history of the only case that I have ever seen recover. This patient was almost moribund when the late Dr. W. G. Macdonald operated for me, withdrawing from the median-basilic vein 100 c. c. of blood and injecting a solution of formalin in normal salt solution in the proportion of 1 part to 4000. When 360 c. c. had been slowly injected the patient complained of such intense burning pain in the back of his head that the operation had to be discontinued. His recovery was uninterrupted and I heard from him about a year later, that he was in excellent condition. Patients with this disease do not die directly from the heart condition but from a general sepsis. If the organism producing this can be isolated the antitoxic serum for that germ would be

theoretically indicated, and in some cases has proved successful. But, as I said before, the majority of these cases succumb under any known form of treatment. The injection of formalin in other cases has not succeeded well at all.

A whole evening, or two or three, might be given to the consideration of "*valvular lesions*." If we suppose the stage of acute endocarditis to have passed and the resulting deformity of the valve or valves to be established, with compensation effected by hypertrophy of the walls of the heart, with or without dilatation, depending on the exact nature of the lesion, we all know that years may elapse before the patient will present rational symptoms causing him any inconvenience. Auscultation will show the murmur due to the lesion present; but he will experience no dizziness or palpitation, or shortness of breath, or cyanosis, or other inconvenience. Under these circumstances the patient should be advised to lead a "Godly, righteous, and sober life," avoiding any unusual exertion or excitement. Treatment by drugs is worse than useless.

But compensation is not always established with the promptness one would desire. In 1881 a young woman of 24 years, who had had repeated attacks of acute inflammatory rheumatism in childhood, came under the care of the late Dr. Jacob S. Mosher, suffering severely with an uncomplicated mitral regurgitation. She could not walk across the floor, and could scarcely turn over in bed, without bringing on a dangerous dyspnoea. Under the continued administration of digitalis she slowly improved during the next two years and came under my care soon after the death of Dr. Mosher, in August, 1883. At that time she could move cautiously about the house but could not walk in the street without discomfort. As she had improved so steadily, the administration of small doses of digitalis, three times a day was continued and about 1900 she moved to a country village in the Catskills, so that I temporarily lost sight of the case. On February 24, 1910, I had an opportunity to examine her again. The heart was markedly hypertrophied; the systolic murmur at the apex, heard plainly at the angle of the scapula and alongside the vertebral column, with accentuation of the pulmonic second sound, were all present. But all rational symptoms had practically disappeared. She was able to teach school

and to take long walks and enjoy them, going slowly up hill, of course. She took digitalis every day from 1881 to 1905, and then discontinued it, because she felt so well that she found that she could be comfortable without it. This patient took digitalis in small doses daily for twenty-four years, with the result of which I have told you. In the interim she had several times tried to give up the drug, but had been obliged to go back to it again.

No special line of treatment is indicated because a patient has a particular lesion of a particular valve. In all of them, if compensation is good, the patient is very comfortable, and when compensation gives out it is almost always because the strength of the heart muscle, the myocardium, fails. Like every other muscle this one is strengthened and improved by reasonable exercise. I am in the habit of allowing these patients to walk, or play golf, or ride horseback, or take any moderate exercise that pleases them, but always to stop the moment they have any shortness of breath or notice any palpitation. Straining or violent exercise of any kind should, of course, be rigidly avoided or sudden death may be the result. It must not be forgotten that excitement, overwork, anxiety, worry, late hours, and excesses of any kind, are quite as injurious as physical exertion.

While compensation is being established, and after it ruptures, heart tonics are most valuable and often absolutely indispensable. No one, I suppose, will doubt that among these digitalis is easily the most valuable, though many different opinions are held as to the most desirable preparation to be used. Personally, I think that the claims made for some of the new preparations are extravagant and cannot be substantiated. It is easy for many of us to recollect the time, when digitalis leaves, and the tincture made from them, were very unreliable. I recollect very well that one of my patients, years ago, took repeated doses of one fluid drachm of the tincture procured from an ordinarily good apothecary without any effect whatever, good or bad. But of late years the leaves have been gathered with so much more care and discretion, and the tinctures so standardized that it is almost unheard of that one does not get the physiological effect of the drug from the ordinary dose, in the usual time. As a simple heart tonic nearly all the modern preparations act well. I may add that

when the diuretic effect is the main desideratum the watery infusion of the fresh leaves seems to give the best results.

The most objectionable property of digitalis is its liability in some cases, to produce nausea and vomiting. When this occurs we must resort to one of the alkaloids of digitalis or else substitute for it strophanthus, strychnine, adonidin, caffein, or spartein. Anasarca and venous engorgement of the internal organs are often most promptly relieved by the old combination of calomel, digitalis, and squills, one grain each at a dose.

Ruptured compensation produces the most distressing condition imaginable. The agony produced by the loss of balance between the respiration and circulation, producing dyspnoea, and not infrequently accompanied by oedema of the lungs, it is perfectly impossible to express in words. In a paper read before this society in April, 1909, I pointed out the speedy and complete relief that could be obtained in oedema of the lungs from the use of nitroglycerin, in what would be deemed by those who have not so used it, as heroic and perhaps almost unjustifiable doses. Doses of one one-hundredth of a grain are practically inert; but if one-twentieth of a grain be given every half minute for ten or fifteen minutes, speedy relief is sure to be obtained.

In the dyspnoea and distress of ruptured compensation, unaccompanied by oedema of the lungs, nitroglycerin alone does not suffice. Heart tonics given in large doses, at as short intervals as circumstances will permit, are absolutely essential. But we all know that the physiological effect of digitalis is not obtained in less than forty-eight hours at the best, while these patients demand and need immediate relief from their agony. In this condition nothing else that I have ever used, or heard of, begins to compare with the hypodermic injection of a quarter of a grain of morphine with one one-hundred-and-fiftieth of atropine, repeated in an hour if necessary.

The administration of heart tonics should be begun at once and persisted in until compensation is restored. Digitalis alone may be employed, or some other heart tonic may be substituted, or a combination may be given. Personally, I have had very satisfactory results from the tablet now known as nitroglycerin compound, containing one-one-hundredth of a grain of nitroglycerin, two minims each of tinct. of strophanthus and digitalis and one-

quarter of a minim of tinct. of belladonna leaves. These can be given from two to six times a day for weeks with benefit.

Some patients seem to be unable to take digitalis in any form for any considerable length of time; and in such I have had, in a few cases, most satisfactory results from Merck's adonidin.

Hypertrophy of the heart is usually a compensatory condition and demands no treatment. But occasionally it arises from over-exertion and causes palpitation and rapid heart action. Then the cause of the hypertrophy should first be removed, rest enjoined for several hours a day, and stimulants and excitement forbidden. For temporary relief an ice bag to the precordial region and the internal administration of aconite have proved most useful in my hands. Since I saw two patients, in the practice of other physicians, many years ago, die after the administration of veratrum viride, in the usual doses, I confess that I have been timid about using it.

Hypertrophy always means a large heart, but not always, and necessarily a strong muscle. And in chronic nephritis, even though the heart be manifestly hypertrophied, relief from disagreeable symptoms will often be obtained by the judicious use of digitalis.

Chronic dilatation of the heart can rarely, if ever, be cured. But the patient's condition can be rendered much more comfortable by hygienic measures, among which rest is at first most important, with a nutritious, easily digested diet; and after improvement has begun massage and regulated, gradually increasing exercise.

"*Acute dilatation*" is a frequent cause of death so sudden as to occur before a physician can reach the patient's side — what used to be called "heart failure." The appropriate remedies, if opportunity offers, are such rapid stimulants as hypodermic injections of strychnia in doses of one-tenth of a grain; saturated solution of camphor in sterile olive oil; sulphuric ether; brandy, and the like.

"*Acute myocarditis*" — that form which ends in abscess — is rarely, if ever, diagnosed during life and the treatment is simply that of the general septic condition.

"*Chronic myocarditis*" is a term rather loosely used to include not only a chronic inflammatory process, but its results in the

way of fibroid degeneration of the muscular tissue and almost invariably associated with arterio-sclerosis and high blood pressure. It goes without saying that fibroid tissue can never be converted back into muscle; but what remains of the muscle can be toned up into doing more work, and better work, and it is not impossible that new muscular fibers may be added.

Attention to the patient's general condition is most important. Strict and detailed attention to his digestion and nutrition should always be given. Vegetable tonics, arsenic, iron, and the phosphorus preparations all help. As many hours as possible should be spent in the open air and sunshine, and the automobile with the inducements it offers to take long rides, accompanied by no mean amount of passive exercise, has proved very beneficial to many of these sufferers. The less tobacco they use the better and none at all is best; but in elderly persons a small amount of whisky — not usually the malt liquors — with their meals, is of benefit. Alcohol in any form on an empty stomach is a mighty poor thing.

Mental strain and anxiety affect these patients just as badly as dietary excesses. It is very easy to tell a patient that he positively *must not* worry about anything, and this is excellent advice; but it is often *absolutely impossible* for the patient to follow it in his ordinary environment. The only practical thing to do is, if possible, to get a man out of his active business life, or a woman out of her domestic worries and annoyances. An entire and prolonged change of air and scene under circumstances, such that others must assume all kinds of responsibilities, is most desirable, and far more efficacious than any amount of good advice.

If the blood pressure is very high nitroglycerin, the nitrates, and erythrol tetranitrate are of great service, and act best when combined with heart tonics. But just here let me give you a word of warning — that their combined use must be regulated by the effect produced on the patient's general condition. It is all very well to say that the normal blood pressure is 130 m. m. of mercury; but I assure you that many of these elderly patients will perform all their functions much better with a pressure of 160 or 170 than they will with less.

In this connection one must not fail to mention the Nauheim baths and the Schott and Oertel methods of exercise. They are all very valuable without a doubt, and it is equally certain that they are all so expensive that their employment is comparatively limited. The effort to use the Nauheim bath at home has had very meagre success. It is an easy matter to prepare a solution of sodium chloride and calcium chloride, and later on to generate free carbonic acid gas in such a bath, and these are the chemical constituents of these baths. But a trip to Nauheim involves many other elements of success. There is an entire change of air and scene; entire relief from the consideration of business propositions and domestic worries is attained; and the patient has profound faith in the skill and experience of his new medical attendant. These are, in my judgment, potent reasons why a trip to Nauheim does so many of these patients so much good.

Let me repeat what I said before — that it is most important to remember that the myocardium, like every other muscle, is improved in strength and tone by judicious exercise after any acute inflammatory process has subsided. This is the keynote of both the Schott and Oertel systems.

Schott recommends what are called "resistance gymnastics." These are elaborately worked up into nineteen different movements and require for their employment the aid of a competent, experienced and skilled attendant. I know of no place where they are successfully applied except at Nauheim.

The Oertel system is quite old, having been presented to the profession in 1885, in Ziemssen's "Handbuch der allgemeinen Therapie." Without going into detail he advises great limitation of the amount of liquid taken into the system, with the use of hot-air or steam baths, and moderate exercise with heavy clothing, all calculated to produce copious perspiration. As soon as the patient's condition permits, exercise by walking is enjoined, along a level at first, and afterwards uphill, very gradually increased, never to the extent of producing an amount of fatigue which is not entirely relieved by a night's rest, and always stopped as soon as any palpitation, shortness of breath, or substernal pain develop. This method I can confidently recommend from observation of a pretty large number of cases in which it has proved of great benefit. Violent exertion, such as lifting any

heavy weight, even for an instant, or running to catch a car, should be absolutely interdicted.

I thank you, gentlemen, for your courteous attention to what I know you must all feel to be a very inadequate presentation of a very important and extensive subject.

SURGERY OF THE HEART.

Read before the Medical Society of the County of Albany, November 14, 1911.

By CHRISTIAN G. HACKER, M. D.

Surgery of the heart and its membranes in the early years of the last century was limited largely to the treatment of various traumatisms resulting from blows, bullet wounds and knife thrusts. Gross in his work on Surgery divides these traumatisms into two classes. Severe wounds and less severe wounds the former applying to those entering the endocardium and in these injuries stated that death occurred early from haemorrhage and if later from inflammation.

With the advent of the aspirator pericarditis was attacked and later still with the development of the antiseptic treatment of wounds the removal of portions of pericardium in adhesive pericarditis or if its invasion was feared from an overlaying malignant growth.

Two cases of this kind have very recently been reported by A. W. M. Robson (*British Medical Journal*, No. 12, July, 1911). In these cases a columnar cell carcinoma of the fifth rib necessitated its removal by dividing it close to the sternum, a large gap was left which was covered over by sliding a piece of pectoral muscle over it. There was no anxiety during the operation until the pericardium was opened, here the pulse flagged for a short time. The first patient lived some months and then died of metastases in bones, the second patient is alive four years after, but now has metastases.

Some four years ago the hope was expressed to this society, by a member, a skilled surgeon, that progressive aseptic surgery

would permit us to repair defective valves and correct constricting cardiac orifices but to date this has not become a reality. The words of Theodore Kocher, however, have become surprisingly true in that the heart ever active and difficult to deal with has at last yielded to surgical treatment.

As early as 1642 J. Wolf reported a recovery from a wound of the heart. O'Conner in 1821 (*London Medical Gazette*) reported a case of transfixion by a darning needle in attempted suicide with recovery.

Trelate in 1846 (*Bul. Gen. Therapy*) removed a large needle which had oxidized after a sojourn of three days in the heart without ill consequences to the patient.

The heart's tolerance for foreign bodies is well demonstrated by Latoni's case in which autopsy six years after accident revealed a bullet in its musculature near the median septum and in this case death had resulted from another cause.

Del Vecchio first sutured the heart successfully in the case of a dog in 1895, Cappelan and Farina were successful in the same procedure in 1896.

Pare previously recognized that every wound of the heart was not necessarily fatal, to Rehn belongs the honor for the first successful Cardiorrhaphy in man in 1897. More recent cases have been reported by Parozzanni and Pagenstecher. Perhaps the most important observation in the surgical pathology of the heart was made by Morgagni who suggested and proved that the principal death-producing factor is compression of the heart with resulting interference with its movement as a result of extravasated blood within the pericardium. Rose has since demonstrated that in order to save life it is necessary to prevent this embarrassment.

Statistics and experiments show frequently that a perforating heart wound will cicatrize firmly if the results of bleeding are avoided, however the scar formed may result later in aneurism and even rupture.

Pagenstecher has collected 10 cases of ventricular wounds with 6 recoveries. Aseptic surgery in the treatment of wounds has made this progress of cardiac surgery possible and its close application will give us a still less mortality. The possibilities of

asepsis in this branch of surgery is splendidly shown in Stewart's collection of 60 cases (1904 Coll. Phy. Phila.) with 23 recoveries and of the 37 deaths 13 died of infection.

To-day we have cardiac surgery presenting possibilities in not alone the treatment of injuries and the removal of foreign bodies but in the treatment of various forms of pericarditis and in the application of cardiac massage, cardocentesis and cardiolyisis.

Haemopericardium may be produced by blunt force or by gunshot wounds without penetration of the pericardium, eight cases of this character are reported (by Deschaumps).

Needle puncture wounds are markedly serious as shown (by Loisin) in 23 collected cases, 14 of which died, the worst are those in which the needle stuck in the chest wall and in moving the heart injured itself by striking against it.

Tory, MacDougal and Stelszer, however, have reported cases in which needles were simply pushed into the heart because they could not be removed; these several cases recovered.

Symptoms and Diagnosis. The early symptoms are not always of a serious type and may present hours later after the initial injury and the patient die suddenly.

There may not be dyspnoea and cyanosis but if heart oppression with compression of veins exist then these symptoms are usually present. With haemorrhage and pulmonary complication collapse is marked and the pulse is almost insensible.

The diagnosis is made from the location of injury, from increasing cardiac dullness, collapse and cyanosis with dyspnoea, when the injury is associated with lung injury a gurgling noise may be observed.

Treatment. As yet there is no standard method of treatment because no individual has had experience enough with operations in heart wound cases to enable him to speak authoritatively (Brewster and Robinson, *Annals of Surgery*, March, 1911).

The value of rest in the treatment of heart wounds was recognized as early as 1850 by Dr. Chas. E. Lavender, who reported to the Medical Association of Alabama, a case of penetrating wound of the right ventricle by a knife blade. This remarkable case made a complete recovery.

Indications for thoracotomy in heart injury. The results in cardiac surgery up to date show positively that our duty as

doctors is to act immediately in cases of injury in the cardiac region with a wound, especially from its position and direction with symptoms of dyspnoea and collapse, to be ready to open the pericardium and bare the heart with the least possible operative trauma to neighboring tissues.

We need not hesitate to widely open the pleura, especially when differential pressure can be employed. Differential pressure although not an absolute necessity is of great value to control the respiratory function, to regulate the heart beat and to inflate the lungs (B. & R.) Kocher suggests the employment of Hertz tamponade and even suture in rupture of the heart secondary to diseases of the arteries because these patients do not die immediately and may live twenty-four hours or more. It is true that most of the persons receiving a heart injury even a perforating wound of the heart wall do not die directly from the injury, but from the subsequent loss of blood, together with the emptying of the heart and the resulting pressure of the extravasated blood on the great veins. With the symptoms previously described exposure by exploratory thoracotomy is plainly the procedure of choice, the object being to prevent compression by cleaning out the pericardial sac of extravasated blood and if indicated by examination suture of the heart substance itself.

Our mode of attack must be modified in accordance with the location of the injury, whether it be above in the auricles, below in the ventricles or to the left or right of the sternum.

The recognized methods of exposure and suture vary greatly and is well demonstrated by the report of Terrier and Reymond, who in eleven cases of heart injury, found that ten different methods had been practiced.

As in every surgical or medical procedure it is well to learn one tried-and-true method. In attacking the pericardium we must bear in mind the following points of importance. First, that we must proceed in a manner which entails the least blood loss and without serious preliminary operation and that injury to the pleura is to be avoided.

Although only a small area of pericardium is uncovered by pleura we must keep within this area. This uncovered area is represented by the junction of the sixth costal cartilage with the

sternum. The method of choice is that of Kocher also recommended by Terrier and Reymond.

Procedure. The usual skin preparation without antiseptics except ether and alcohol. Then an incision is made from the mid line of the sternum along the sixth costal cartilage extending to its junction with the rib proper. The costal attachment of the left rectus muscle is severed, its fibers together with those of the pectoralis major are separated from the upper and lower borders of the cartilage. The intercostals are detached above and below, the perichondrium is freed. The sixth costal cartilage divided close to the sternum and the cartilaginous bridge between it and the seventh cartilage removed. The mammary vessels are then divided between two ligatures. The triangularis sterni is divided close to the sternum, it is frequently adherent to the pleura after division it is retracted outward. The pleural reflection can be recognized by the presence of a fat layer which renders its separation from the pericardium quite easy if moist gauze dissection is employed, with relative ease the pericardium may now be exposed down to its diaphragmatic attachment.

In a case of less urgency the incision is carried upwards in the mid sternal line to the fourth, or if needed, to the second rib, here a transverse incision nine cm. in length is carried through the pectoral fibers down to the rib cartilage and bone, from the upper borders of which the muscular and tendinous fibers of the intercostals are detached.

The pleura and triangularis sterni are separated from the respective cartilages and these in turn have previously been divided close to the sternum. The triangularis and pleura are now retracted, the cartilages broken across at their junction with the ribs, and a flap of thoracic wall turned outward. This gives a complete pericardial exposure from the auricles to the apex and also offers opportunity to detect and clamp any pleural tear.

In passing sutures into the heart musculature numerous methods are recommended, but the procedure of choice also suggested by Kocher, is to elevate the heart by passing two fingers behind it, to explore the posterior surface the apex may be grasped with forceps.

Leaving the first suture long aids in placing the succeeding sutures. The heart and pericardium have tolerated all forms of

drainage except glass, but the voice of most observers is to close the pericardium and pleura by suture in clean cases without drainage and to drain in infected cases.

The conclusion formed in cardiac injury as in abdominal penetrating wounds considering the high mortality without pericardial drainage at least would warrant exploratory thoracotomy.

Cardiac massage. Cardiac massage was first suggested by Schliff in 1874, but was not applied to man until 1898. The power of heart muscle to functionate after death under certain physical conditions is frequently seen in the laboratory.

Kubiabko demonstrated that isolated heart muscle would contract 24 hours after isolation if it was preserved in a frozen salt solution and Locke's solution injected into it.

Various methods for the production of reestablished function have been successful in animals but not in man. Cardiac massage, however, has a place in our surgical resources and has been recommended in syncope of varied origin, as from drowning, asphyxia, chloroform, or in suspended function from exhaustion or injury.

Its use is well demonstrated in the case reported by Frazier (*Jour. A. M. A.* March 20, 1911, p. 1449,) in which a male, aged 55, a moderate user of alcohol, was operated for hydrocele. Ether started, patient took an unusual amount. Chloroform was substituted, and with apparent success. The operation had just begun when cyanosis was observed, in a moment he was pulseless and the respiration ceased. The head of the table was rapidly lowered and artificial respiration started. Doctor Frazier realized the otherwise hopeless situation, opened the abdomen, and with one hand on the chest wall and the other hand against the diaphragm massaged the heart at the rate of 15 to 20 movements a minute. During the excitement the actual time was not recorded, but in approximately two minutes feeble, irregular fibrillary contractions were felt gradually, the impulse became stronger and more regular and after eight minutes, during which time massage was continued, resuscitation seemed assured. Pulse 130. The abdomen was closed and the operation on the hydrocele finished and the patient made an uneventful recovery.

The procedure of cardiac massage may be performed by three methods: direct, transdiaphragmatic, and subdiaphragmatic. Of

these the subdiaphragmatic is perhaps the one to be adopted except in children in whom the elasticity of the chest wall enables one to make sufficient pressure on the heart, without opening the abdomen or chest, it is simpler and has the highest per cent of successes.

The literature to date contains no reported recoveries where syncope has existed more than 10 minutes and in the greatest number of successes the time elapsed did not exceed five minutes. As oxygenation of the blood is indispensable to resuscitation artificial respiration should also be practiced.

There have been no successes with the transdiaphragmatic message but the case reported by Rehn (*Münchener Med. Wochenschrift*, November, 1909) is of interest. Subdiaphragmatic massage and Sylvester's method of artificial respiration failed, the diaphragm was then opened and direct massage performed, at the same time establishing positive pressure with the Brauer apparatus. Improvement was at once noted, but in two hours respiration failed again. Rehn charges the failure to a pneumothorax from tearing the pleura when he opened the diaphragm.

True cardiocentesis is a hazardous procedure and not as yet to be recommended.

Paracentesis pericardii is indicated in serous pericarditis and according to Curschmann in the sero-fibrinous and hemorrhagic forms.

Surgical pathology. Voitsch has proved with gelatine injections that in the sitting posture small effusions collect in the recess between the anterior pericardial attachment to the diaphragm and toward the apex, this is therefore the posture best suited for drainage at the time of operation as well as afterward.

Seat of puncture. As the pericardium in distending does so especially to the left and the heart approaches the chest wall, therefore in performing paracenteses, the portion of pericardium in contact with the thoracic wall is to be avoided.

With this knowledge in mind Curschmann advises that puncture be made in the mammary line in the fifth or sixth space and even goes farther out, in doing so the needle traverses both pleural layers.

Puncture close to the sternum as recommended by Delorme is not devoid of possible injury to the internal mammary vessels which lie one or two centimeters from the sternal border, besides puncture here as well as six centimeters from the sternal edge (Dieulafoy's) point is attended with risk of heart puncture. The fluid should be withdrawn slowly and in small effusions. The use of paracentesis should be limited.

Paracentesis, however, has its chief application in serous pericarditis, for in the sero fibrinous or haemorrhagic form there is risk of adhesions after the fluid left coagulates and in this class of cases pericardiostomy is the superior operation.

Its poor application in suppurative pericarditis is well shown by Ferrier in his reporting 9 cases with 9 deaths, following puncture, while 16 recovered out of 35 by incision, 6 out of 19 without resection, and 8 out of 14 with resection.

Cardiolysis was originally devised by Delorme for pleural adhesions and later he applied the operation to the heart, opening the pericardium for extensive adhesions. This operation is attended with considerable risk because there is great possibility that the heart musculature may be torn in performing it.

Brauer has endeavored to free the heart from the mechanical hindrance in another way. He leaves the adhesions sensibly alone, but endeavors to mobilize the thoracic wall in front of the heart by resection.

It is of interest to note that Beck reported three cases of mediastinal pericarditis with systolic thoracic tugging and diastolic impulse with myocarditis, congestion of the liver and kidneys and ascites for which he partially resected the bony thorax turning up a flap of skin and muscle from the sternum to the anterior axillary line its convex border extending down to the lower border of the sixth rib. He then resected the third, fourth, fifth and sixth ribs from the sternum to the anterior axillary line. All the patients recovered and the symptoms of congestion were relieved.

The semi-recumbent position must be respected in the after care to favor drainage.

AN ANECDOTE OF DR. TRONCHIN.

Dear Sir:

While reading the "*Souvenirs du Chevalier de Cussy*" recently published for the first time, I fell upon another anecdote of the famous Dr. Tronchin, which he himself related to his friend the Marquis de Bonnay, who in turn, gave it to the Chevalier de Cussy.

As the erudite physician was in the habit of passing through Nevers on his way to his native city of Geneva, a lady of the former town came to consult him at each of the various visits that he made while passing on his journey. This woman said she had been pregnant for *several* years and it was necessary for the good doctor to palpate and examine the patient, *per vaginam*.

Tronchin noted a rather pronounced enlargement of the abdomen, but could not discover any symptom or evidence of pregnancy. This examination took place upon five or six occasions when the doctor was passing through Nevers, the patient each time insisting that she was pregnant and demanding an examination. Finally at the sixth trip, the noted practitioner came to the conclusion that the woman, whose throat was a model for a sculptor, and who gaily and without pudor gave herself up to these examinations, resorted to these clinical investigations simply from libertinism.

Consequently, assuming a very grave air Dr. Tronchin addressed his client as follows: "Madam, you think you are pregnant. Your child must now be about ten to twelve years old. I see no other remedy for your condition than to swallow a tutor."

The most astonishing part of the affair was that the patient did not understand the meaning of Tronchin's words and some months later she wrote the doctor that as she was *still pregnant*, she would consult him when he next passed through Nevers. And Dr. Tronchin confided to de Bonnay that, for fear of seeing the woman again, he in the future returned to Switzerland by another route.

Very truly yours,

CHARLES G. CUMSTON.

Boston, April 15, 1912.

Editorial

"Now, gentlemen," said Doctor Baleinier to them, "light the cotton; place the lighted end on the skin of his reverence by means of the tripod, which contains the wick, cover the tripod with the wide end of your tubes, and blow through the mouthpiece in order to keep the fire burning; it is very simple as you see."

It was, in truth, of patriarchal and primitive invention.

Four wicks of lighted cotton, so disposed as to burn but slowly, were applied right and left to Rodin's chest.

This is commonly called *moxas*. The operation is complete, when the whole thickness of the skin is thus slowly burnt away, which takes from seven to eight minutes. It is declared that an amputation is nothing in comparison.

Rodin had watched the preparations for the operation with undaunted curiosity, but, at the first contact of the four consuming braziers, he curled himself up, and twisted like a serpent, without being able to utter a cry, for he was mute; thus even the expression of his agony was interdicted.

The four assistants, having necessarily deranged their apparatus at the sudden movement of Rodin, had to begin again.

"Courage, my dear father, offer these sufferings to the Lord—He will accept them," said Doctor Baleinier, in a soothing voice. "I warned you that the operation was a very painful one, but then it is as salutary as it is painful. Come, you who have evidenced so much resolution already must not wince at the decisive moment."

Rodin had closed his eyes, but, overcome by this first surprise of anguish, he looked at the doctor with an air almost ashamed at being so pusillanimous.

Yet right and left, on his breast, were already visible four large scars of blood-red hue—so fierce and deep had been the burns.

The Wandering Jew.

EUGENE SUE.



Stevenson has written that The Four Musketeers Intermittent of Dumas are historic. A reasonable interpretation of the remark is that the romantic environment of Romance. of the Court of the Grand Monarque gave opportunity for the development of human character to a point of excellence which in a more prosaic age would appear exaggerated or idealistic. The attributes of Athos, Por-

thos, and D'Artagnan, combined in one man represent perfection. Each personifies a primal human element: Athos, the moral, Porthos, the physical, and D'Artagnan, the intellectual. The subtlety and ambition of Aramis are used by their creative genius as a counterfoil to bring into greatest relief the excellence of his companions. For the medical reader, or any other whose thought leads to contemplation of the mental and physical possibilities of his kind, the study of these heroes is fascinating. Athos, Aramis and D'Artagnan attract the metaphysician; Porthos is a marvel of physical strength, and in its evolution and decay Dumas portrays symptoms which range his hero as a proper "case" for clinical speculation. He needed a man of Herculean power, and used him in many critical emergencies; it was natural, perhaps inevitable, that his mighty muscles should fail in a crisis such as so many times had wrought great destruction of others.

The novelist advances no theories, nor does he trouble himself with pathology. He records events as he wishes them, and too often in disregard of fact. Perversion of natural law is a common blemish of fiction, and the interesting question is presented, whether Dumas, in the superb D'Artagnan romances, transcended fact in the tragic dissolution of the gigantic Porthos. The first intimation of decline of physical power, which led D'Artagnan to exclaim on one occasion "I know only one man capable of such a feat as that!" was the description of his ancestors by Porthos. Dumas thus introduces the clinical aspects of the family taint:

"Then why do you look so dismal, Porthos?"

"I may as well tell you: I am making my will."

And honest Porthos, while speaking, gazed mournfully at his friend.

"Your will!" cried the bishop. "Oh, nonsense! Do you feel that you are going to die?"

"I feel that I am tired. It is the first time I have felt so, and there is a certain custom in our family."

"What is it, my friend?"

"My grandfather was twice as strong as I am."

"Oh!" exclaimed Aramis. "Why, your grandfather must have been Samson, then?"

"No, his Christian name was Antoine. Well, one day, when he was my age, just as he was about starting out hunting, he felt his legs growing weak, a man who had never been ill in his life."

"And what did that lead to, my friend?"

"To nothing pleasant, as you'll see. For when he was in the forest and still complaining of the feebleness of his legs, he met a boar. The boar faced him; he fired off his arquebuse, missed, and the beast ripped him up. He died immediately afterward."

"But that is no reason why you should be alarmed, Porthos."

"Oh, you'll see! My father was at one time quite as strong as I am. He was a stout-hearted soldier of Henri III. and Henri IV. He was not named Antoine, though, but Gaspard, like M. de Coligny. He was always on horseback and had never known weariness. One evening his legs failed him, after rising from the table."

"He had made a liberal use of the wine at supper; it is easy to see why he staggered."

"Bah! and he a friend of M. de Bassompierre? What nonsense! He was astonished at feeling so tired, and said to my mother, who was bantering him: 'I am really afraid I am about to encounter a boar, like the defunct M. du Vallon, my father, did.'"

"Well?" asked Aramis.

"Well, my father determined to brave his weakness and go down into the garden instead of going to bed. He lost his footing at the first step; the stairs were steep; he fell against an iron projectile in a corner of the staircase, and his skull was split open; he died on the very spot."

Aramis raised his eyes to his friend's face.

"These two circumstances are, indeed, extraordinary," said he, "but we must not infer that they are to be followed by a third. A man such as you are, my dear Porthos, should not be superstitious. Besides, what reason have you for saying your legs bend under you? Why, I have never seen you looking so erect and stately! You could carry a house on your shoulders."

"Oh, at present I feel hale and hearty, but not long ago I stumbled and grew weak, a phenomenon, as you would call it, which recurred four times. I do not say that this frightens me, but it vexes me; life is so pleasant. I have money, fine estates, horses that I love, friends that I love, too: D'Artagnan, Athos, Raoul, and you."

The incomparable Porthos did not even attempt to hide from Aramis the rank he held in his friendship.

Aramis pressed his hand.

"We have many years before us," said he, "many years to preserve for the world a few samples of rare men. Trust me, dear friend. There is no answer from D'Artagnan, it is a good sign. He must have given orders for drawing his ships together and freeing these waters from them. I have also given orders to have a boat brought on rollers down to the outlet of the great underground passage at Locmaria, the place, you know, where we have often lain in wait for foxes."

"Yes, and which is connected with a little creek by a channel we discovered the day that splendid fox escaped us."

"Exactly. In case of misfortune we'll conceal a boat in that underground passage; in fact, it should be there already. We'll wait for a favorable moment during the night, and then—to sea."

"A capital idea; but what is the use of it?"

"The use of it is that no one knows of this grotto, or rather, this outlet, except two or three hunters living on this island; and that, if the island is occupied, the scouts, not perceiving any craft around the coast, will never suspect that any one can escape, and will stop watching."

"I understand."

"How are the legs now?"

"In excellent condition at present."

"You see, then, that everything conspires to give us rest and hope. D'Artagnan is sure to leave the sea free to us and give us an assured prospect of liberty. No more royal fleets or descents to be feared. *Vive Dicu!* we have any number of splendid adventures still before us, Porthos; and, if I reach Spain, I swear to you," added the bishop, with terrible energy, "your ducal patent is not so uncertain as people may think."

"Let us hope so," returned Porthos, somewhat cheered by his companion's warmth.

Suddenly a cry was heard:

"To arms!"

The cry, repeated by hundreds of voices, was borne into the chamber where the two friends were sitting, bringing surprise to one of them, anxiety to the other.

Aramis opened the window. He saw a great crowd with torches. Women were flying, and armed men were rushing to their posts.

"The fleet! the fleet!" cried a soldier, as soon as he recognized Aramis.

"The fleet?" asked the bishop.

"Within half a cannon-shot," continued the soldier.

"To arms!" cried Aramis.

"To arms!" repeated Porthos, in a voice of thunder.

And both ran to the mole so as to be sheltered behind the batteries.

Sloops, laden with soldiers, were seen approaching. They were taking three different directions, evidently intending to land at three different points at the same time.

"What ought to be done?" asked an officer on guard.

"Stop them; if they continue to come on, fire!" answered Aramis.

Five minutes later the cannonade began.

These were the shots heard by D'Artagnan when he touched the soil of France.

But the sloops were too close to the mole for the cannon to hit them. The soldiers landed, and then a fierce hand to hand conflict ensued.

"What is the matter with you, Porthos?" inquired Aramis of his friend.

"Oh, a mere nothing—my legs—it is really incomprehensible. But they will be all right when we charge."

And thereupon Porthos and Aramis charged with much vigor, and inspired their men with such valor, that the royalists reembarked in confusion, taking nothing with them except their wounded.

"But, Porthos, we must have a prisoner," cried Aramis, "quick!"

Porthos, bending over the steps of the mole, seized by the nape of the neck one of the officers of the royal army, just as he was waiting to follow his men into a gunboat. The giant's arm raised aloft this prey, which served him as a buckler, for not a single shot was fired at him.

"Here is your prisoner," said Porthos to Aramis.

"Good!" cried the latter, laughing. "Now will you calumniate your legs!"

"But I did not catch him with my legs," answered Porthos, dejectedly, "it was with my arm."

* * * * *

After launching the barrel of gunpowder into the midst of his enemies, Porthos, in obedience to the directions of Aramis, had fled, and had reached the last compartment, into which air, light, and sunshine penetrated through the opening.

Therefore, he had no sooner turned the corner that separated the third compartment from the fourth than he saw the boat dancing on the waves within a hundred paces of him. There were his friends; there was liberty; there was life after victory.

Just six of his long strides and he would be outside the vault; two or three vigorous spurts beyond the vault, and he would be at the boat.

Suddenly he felt his knees bending under him; they seemed powerless, and his legs, too, felt paralyzed.

"Oh! oh!" he murmured, in amazement, "that weariness has got hold of me again; why, I can't walk! What does it mean?"

Aramis perceived him through the opening, and was wondering why he delayed.

"Come on, Porthos!" he cried; "come on!"

"Oh!" replied Porthos, straining his whole body in a useless effort, "I am not able."

And he fell upon his knees; but with his mighty hands he clung to a rock and raised himself up again.

"Quick! quick!" shouted Aramis, bending towards the shore, as if he would draw Porthos into his arms.

"In a moment," stammered Porthos, gathering all his strength for another step.

"In God's name, Porthos, come away at once! The barrel will explode in a second!"

"Come away, monseigneur!" cried the Bretons to Porthos.

But there was no longer time; there was a deafening roar, the ground yawned, the smoke that sprang up through the broad fissures hid the

sky, the sea hurried away from the shore, as if chased by the breath of flame spouting from the grotto as from the jaws of some gigantic chimera; the tide carried the bark a distance of some forty yards from the beach, and all the rocks were shattered to their base, rent asunder as easily as blocks are under the hammer. A portion of the vault was carried up to the heavens, drawn thither as it were by invisible cables. The green and rose-colored flames of the sulphur, and the black lava of the argillaceous liquefactions wrestled together and fought for a moment under the majestic dome of smoke. Then long ridges of rock, which the violence of the explosion had not been able to uproot from their primeval pedestals, were seen to oscillate for one instant, lean over, and fall in succession; they seemed to bow to one another slowly like grave old men, before stretching themselves forever in their dusty tombs.

This appalling eruption apparently restored to Porthos the strength he had lost. He stood on his feet, a giant among these giants. But just as he was making his way between the double row of granite phantoms, the latter, no longer buttressed by their corresponding supports, came down crashing around this Titan, who looked as if he had been hurled down from Heaven among the rocks he had just launched against it.

Porthos felt the trembling of the soil beneath his feet, shaken as it was by this protracted convulsion. He spread out his vast hands to the right and left to repel the sinking rocks. A gigantic block on each side of him was kept back by these extended palms; but he hent his head, and another mass of granite fell between his shoulders.

For a moment the arms of Porthos had given way. Then this Hercules collected all his strength, and the two walls of the prison in which he was buried were slowly driven back and gave him room. For an instant he stood in this frame of granite like the ancient angel of chaos. But in repelling the lateral rocks, he had removed his point of support from the monolith lying on his shoulders, and pressing him down now with all its weight, it forced the giant to his knees. The lateral rocks, driven back for a time, again approached and added their tons to a weight that of itself would have sufficed to crush half a score of men.

The giant fell without raising a cry for help; he fell while answering Aramis with words of encouragement and cheer; for, thanks to those powerful buttresses, his hands, he might hope, like another Enceladus, to shake off this triple load. But Aramis soon perceived that the block was sinking, perceived that the hands and arms, braced for a last effort, were giving way, perceived that the squared shoulders, now wounded and torn, were disabled, and that the rock was slowly sinking down.

"Porthos! Porthos!" cried Aramis, tearing his hair, "Porthos, where are you? Speak!"

"Here! here!" murmured Porthos, in a dying voice; "patience! patience!"

No sooner had he uttered these words than the momentum of the fall increased the weight; the enormous rock fell, weighed down by the two lateral rocks, which fell on top of it, and Porthos was buried in a sepulchre of broken stones.

On hearing the dying voice of his friend, Aramis had leaped on shore. Two of the Bretons followed him,—one staying behind to watch the boat,—each with a lever in his hand. The last groans of the valiant athlete guided them to the part of the ruin where he lay.

Aramis, now as animated and vigorous as a youth of twenty, sprang toward the triple mass, and, with those hands of his that were as dainty as a woman's, raised, by a miracle of energy, a corner of the immense granite tomb. Then through the sepulchral darkness he caught a glimpse of his friend's eyes, which were shining, the lifting of the mass above him having enabled him to breathe for a moment. Immediately the two Bretons hurried up, grasped tightly their iron levers, and united their triple strength, not only to raise that mass, but to keep it raised. All their efforts were vain. The three men had to give way slowly, with cries of grief, and the rough voice of Porthos, who perceived they were exhausting themselves in a useless struggle, murmured, in a tone of banter, the last words that came to his lips with his last breath:

"Too heavy for you!"

Then the eye darkened and closed, the face grew white, the hands livid, and the Titan fell back, heaving his last sigh. With him sank the rock, which even in his agony he had upheld until now!

The three men dropped their levers, which rolled over the sepulchral stones.

Pale and breathless, his brow bathed with perspiration, Aramis listened for a sound, with an agony that was heartbreaking.

Nothing! The giant was sleeping his eternal sleep in the tomb which God had made to his measure.

Sudden suspension of muscular power of the lower limbs with restoration of function after rest is the essential phenomenon of the condition known as Intermittent Claudication. To Charcot is due the honor of the first description of this symptom in man. In the *Mémoires lus à la Société de Biologie* for 1858 is published his communication "Sur la Claudication Intermittente observée dans un Cas d' Oblitération complète de l'ane des Artères Iliques Primitives," in which is described the case of a soldier wounded by a bullet which penetrated the right flank, and injured the right common iliac artery, inducing an aneurism and obstructing the normal current of the blood. Intermittent limping followed. Brown-Sequard is cited as having noticed temporary loss of motion after ligation of the abdominal aorta. The explanation is that muscles resume function after rest,

during which blood supply is renewed. In the *Mémoires* for 1870 Ollivier records a second case due to syphilitic arterial disease. Prior to the contributions of Charcot and Ollivier, Bouley, in 1831, and Goubaux, in 1846, described intermittent claudication in horses, commonly known as "Spring Halt." The literature upon the subject in recent years has been fairly voluminous, particularly in Germany and America. In 1898 Erb published an exhaustive monograph, mentioning, among other causes, hereditary predisposition, and designating the condition "dysbasia angio-sclerotica intermittens;" Higier used the name "myasthenia angio-sclerotica," and Walter and Paul called it "angina crucis." In his excellent synopsis Gordinier (ALBANY MEDICAL ANNALS, December, 1908) summarizes the symptoms as follows in the order of their importance: *first*, their intermittent character, *second*, their absence while the limbs are at rest; *third*, the development of painful limping on exertion; *fourth*, their disappearance after a period of rest, to be repeated on exertion, and *fifth*, the absence, during an attack, of pulsation of the posterior tibial and dorsalis pedis arteries.

It will thus be seen that Dumas invoked for the culmination of the wonderful contest in the grotto of Locmaria the aid of an exact clinical fact. He opened the way by analysis of an hereditary taint, a possibility conceded by Erb forty years later. "The Man in the Iron Mask," containing the magnificent account of the heroic death of Porthos, was published in 1850, eight years before Charcot made known the possibility of intermittent claudication in man. The interesting question arises as to the source of the inspiration of Dumas. There was no medical literature upon the subject. He may have had acquaintance with Charcot, but Charcot's patient was not admitted to the Charité until 1851. Dumas, then, either had observed such a patient, or boldly introduced a disease to meet the circumstance of his story. Genius is given the novelist to discern character as others do not know it. Perhaps this accuracy of conception looks deeply, and anticipates results more slowly observed by the less keen-witted. But speculation upon the remarkable incident may be carried too far.

The medical reader, laughing over the balsam of D'Artagnan's mother, which soothed the wounds of the Musketeers in their

fiery youth, mourning over the decline and grief of the noble Athos, amazed at the last titanic struggles of Porthos and his scientifically accurate death, lays aside these wonderful romances, with regret that all medical literature may not be expressed in the fascinating style of Dumas.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, MARCH, 1912.

Deaths.

Consumption	22
Typhoid fever	3
Scarlet fever	0
Measles	0
Whooping-cough	3
Diphtheria and croup.....	4
Grippe	5
Diarrheal diseases	2
Pneumonia	16
Broncho-pneumonia	10
Bright's disease	21
Apoplexy	14
Cancer	6
Accidents and violence	9
Deaths over 70 years.....	42
 Total deaths	192
Deaths under 1 year.....	23
Death rate	22.59
Death rate less non-residents.....	19.65

Deaths in Institutions.

	Resident.	Non-Resident
Albany Hospital	15	7
Albany Orphan Asylum.....	0	0
Child's Hospital	0	1
Albany County Jail.....	0	0
County House	6	0
Home for the Friendless.....	1	0
Homeopathic Hospital	9	4
Hospital for Incurables.....	0	0
House of Good Shepherd.....	1	0

Little Sisters of the Poor.....	I	0
Public places	I	I
Penitentiary	0	0
St. Margaret's House.....	0	1
St. Peter's Hospital.....	14	5
Austin Maternity Hospital.....	I	0
Albany Hospital, Tuberculosis Pavilion.....	2	0
Confederation of Labor.....	0	0
	<hr/>	<hr/>
	51	19
Births		103
Still births		9

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

In the Bureau of Plumbing, Drainage and Ventilation there were one hundred eighty-seven inspections made of which eighty-two were of old houses and one hundred five of new houses. There were fifty-eight iron drains laid, twelve connections to street sewers, fifteen tile drains, five urinals, fifty-nine cesspools, ninety-four wash basins, ninety-eight sinks, seventy-eight bath tubs, sixty-one washtubs, one hundred sixteen tank closets and two shower baths. There were one hundred twenty-two permits issued of which ninety-two were for plumbing and thirty for building purposes. Twenty-six plans were submitted of which fourteen were of old buildings and twelve of new buildings. Forty-seven houses were tested which were water tests. Thirty houses were examined on complaint and forty-eight were re-examined. Fifteen complaints were found to be valid and fifteen without cause.

BUREAU OF CONTAGIOUS DISEASE.

Cases reported.

Typhoid fever		7
Scarlet fever		7
Diphtheria and croup		35
Chickenpox		4
Measles		9
Whooping-cough		6
Consumption		22
Total		90

Contagious Disease in Relation to Public Schools.

	Reported.		Deaths.	
	D.	S. F.	D.	S. F.
Public School No. 1.....	2	..	..	..
Public School No. 2.....	2	..	..	..
Public School No. 10.....	..	I	..	..
Public School No. 16.....	..	1	..	..
Public School No. 20.....	5	..	2	..
Public School No. 21.....	I	..	..	..
Cathedral School.....	I	..	..	..

PUBLIC HEALTH

Number of days quarantine for diphtheria:		
Longest.....	36	Shortest..... 4
Number of days quarantine for scarlet fever:		
Longest.....	35	Shortest..... 17
Fumigations:		
Houses.....	58	Rooms..... 299
Cases of diphtheria reported		35
Cases of diphtheria in which antitoxin was used.....		35
Cases of diphtheria in which antitoxin was not used.....		0
Deaths after use of antitoxin.....		3

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	14
Negative	28
Failed	0
Total	42

Living cases on record March 1, 1912..... 355

Cases reported during March:

By card	14
Dead cases by certificate.....	8
	22

377

Dead cases previously reported.....	14
Dead cases not previously reported.....	8
Duplicates	1
Recovered	0
Removed	0
Unaccounted for	0
	23

Living cases on record April 1, 1912..... 354

Total tuberculosis death certificates filed during March..... 22

Net city tuberculosis deaths..... 22

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	33
Initial negative	230
Release positive	35
Release negative	210
Failed	15
Total	523

Test of sputum for tuberculosis:	
Initial positive	19
Initial negative	42
Failed	3
Total	64

BUREAU OF MARKETS.

Market inspections	118
Public market inspections.	21
Fish market inspections.	4
Fish peddler inspections.	2
Pork packing house inspections.	2
Rendering establishment inspections.	2
Slaughter house inspections.	1
Hide house inspections.	7

MISCELLANEOUS.

Mercantile certificates issued to children.	16
Factory certificates issued to children.	10
Children's birth records on file.	26
Number of written complaints of nuisances.	36
Privy vaults	5
Closets	4
Plumbing	14
Other miscellaneous complaints.	13
Cases assigned to health physicians.	90
Calls made	210

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR MARCH, 1912.—Number of new cases, 169; classified as follows: Dispensary patients receiving home care, 3; district cases reported by health physicians, 2; charity cases reported by other physicians, 57; moderate income patients, 86; metropolitan patients, 21; old cases still under treatment, 93; total number of cases under nursing care during month, 262. Classification of diseases for the new cases: Medical, 40; surgical, 11; gynecological, 4; obstetrical under professional care, mothers, 50; infants, 52; eye and ear, 1; throat and nose, 2; infectious diseases in the medical list, 9. Disposition: Removed to hospitals, 6; deaths, 13; discharged cured, 100; discharged improved, 20; discharged unimproved, 12; number of patients still remaining under care, 111.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 1; nurses in attendance, 1; patients carried over from last month, 1; new patients during month, 1; patients discharged, 1; visits by head obstetrician, 0; visits by attending obstetrician, 0; visits by students, 5; visits by nurses, 9; total number of visits for this department, 14.

Visits of Nurses (all departments).—Number of visits with nursing treatment, 1,360; for professional supervision of convalescents, 433; total number of visits, 1,793; cases reported to the Guild by five health physicians and fifty-one other physicians; graduate nurses 9, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 97; new patients, 131; old patients, 413; total number of patients treated during month, 544. Classification of clinics held: Surgical, 13; nose and throat, 9; Eye and ear, 17; skin and genito-urinary, 9; medical, 11; lung, 13; dental, 0; nervous, 1; stomach, 4; children, 2; gynecological, 8.

ALUMNI DAY.—The annual alumni reunion and commencement exercises will be held on Tuesday, May 14th.

ALBANY HOSPITAL.—The annual report of the Albany Hospital shows that the institution is in a very prosperous condition, having treated many more patients than in any other year and that more operations were performed.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held at the County Court House on Tuesday, April 9, 1912, at 8.30 P. M.

"Diagnosis and Treatment of the Rectum," Dr. Jerome H. Lynch, New York City.

A special meeting was held in the High School Auditorium Monday, April 22, at 9.00 P. M. Mayor George R. Lunn addressed the meeting on important topics concerning health conditions in Schenectady.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—At the annual meeting held in Albany, April 16th, 17th and 18th, the following officers were elected: President, John F. W. Whitbeck, Rochester; vice-presidents, W. S. Gleason, W. F. Campbell and R. Paul Higgins, Brooklyn; secretary, Wisner R. Townsend, New York; treasurer, Alexander Lambert, New York; counsel, James Taylor Lewis, New York; delegates to American Medical Association, Wendell C. Phillips, New York; Dwight Murray, Syracuse; James P. Warbasse, Brooklyn; L. H. Neuman, Albany; Julius Uhlman, Buffalo; alternates, Walter I. Carr, New York; O. E. Jones, Rochester; G. C. Badill, Ogdensburg; Rosalie S. Morton, New York; and William D. Johnson, Batavia.

Rochester was selected as the place for the next meeting.

HARVARD MEDICAL SCHOOL.—On October 1, 1912, a Graduate School of Medicine as a department of Harvard University and under the Faculty of Medicine will be started. The new school will be administered by a separate Dean and Administrative Board.

The object is to extend to graduates in medicine opportunities for further study that are as thorough and scientific as the best instruction given in a first-class medical school, and to offer to those who are qualified the best opportunities for advanced study and research in all branches of medical science. The laboratories of the Harvard Medical School are exceptionally well equipped for this work, and the clinical facilities in the hospitals and other institutions of Greater Boston are excellent.

TUBERCULOSIS INFECTION IN HOME DISTRICTS.—A plan to wipe out the centres of tuberculosis infection in the tenement districts of New York and other cities, has been undertaken by the New York Association for Improving the Condition of the Poor. An entire section of the East River Homes, more familiarly known as the Vanderbilt Tenements, has been leased for three years and has been converted into a home hospital. In this new institution the Association has begun a new experiment in the home treatment of consumptives and the relief of persons suffering from the disease. For the next three years an effort will be made to determine whether the spread of tuberculosis can be checked and cures effected under medical direction, aided by competing nursing, adequate relief, freedom from worry, fresh air and sunshine, and room for reasonable segregation.

In this New Home Hospital the Association will provide for segregation within each apartment and for fresh air treatment, especially for the children. A hospital and sanatorium regime will be instituted and everything affecting the health, both of the patient and the other members of the family, will be carefully supervised. Equal attention will be paid to the social and medical side of the families.

Patients will be allowed to work only upon the advice of the physician, and when permitted they will begin gradually as their strength permits. In order that cures may be permanent, families will not be dismissed from the hospital until they are able to work full time. After dismissal each family will be moved into a suitable home and supervision will be continued by the Association until it is assured that the cure is permanent and the family actually self-supporting.

The tuberculosis children and those predisposed to the disease will attend an open-air school, which will be established on the roof of the East River Homes. This will be equipped and the teacher probably provided by the Board of Education.

This experiment is not to demonstrate something to take the place of hospital segregation or sanatorium treatment, but to prove that even in a crowded city, given proper housing, sufficient food and sanitary supervision, it is possible to check the spread of tuberculosis, and to treat the disease with a reasonable measure of success. The experiment is

planned as a supplement to, not a substitute for, the hospital and sanatorium. We do not propose home treatment in preference to a sanatorium, but, for hundreds now on waiting lists and for thousands now spreading contagion in dark, dirty tenements, it is home treatment or nothing at least for years to come. The success of this experiment would encourage the community vigorously to combat tuberculosis in the city tenements; it would impel the community to begin the combat at once; it would convince the community that it is unnecessary to wait years, until sufficient hospital and sanatorium facilities are provided, before attempting in a large way to eliminate tuberculosis; it should stimulate the community to forbid the maintenance of unsanitary buildings, as well as to construct those of the same high standard as the East River Homes and there to treat persons having tuberculosis without the necessity of breaking up homes or depriving those who are able to work of the opportunity to do so, and thus to contribute as much as they possibly can to their support.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—Publicity in newspapers and magazines to the amount of 1,500,000 inches a year on tuberculosis and its prevention is being given by the press of the United States, according to an estimate issued by the National Association for the Study and Prevention of Tuberculosis.

If all the publicity on tuberculosis given by the press of this country in the year ending April 1st were gathered in one paper, the National Association estimates it would make a paper of over 6,250 pages. In the last four years, during which time an active campaign has been carried on, the National Association estimates that over 5,000,000 inches or over 90 miles of press notices on tuberculosis have been published.

"Publicity is the very heart of the educational campaign against tuberculosis" says Dr. Livingston Farrand, the Executive Secretary of the National Association. "Largely because of the intelligent co-operation of the press, has the anti-tuberculosis movement in this country been able to become, as it is, the greatest organized movement of its kind in the world. When tuberculosis shall have become a rare disease, the American press may justly claim a large share in its gigantic achievement."

VALUE OF TUBERCULOSIS CURE.—Substantial progress in the anti-tuberculosis campaign will be reported when the National Association for the Study and Prevention of Tuberculosis meets in Washington on May 30th and 31st. Dr. Masyck P. Ravenel, of the University of Wisconsin, is president of the Association, and Col. Theodore Roosevelt and Sir William Caler are honorary vice-presidents.

One of the subjects that will receive especial attention at the meeting will be that of the permanent value of the cure of tuberculosis in restoring patients to working efficiency. Dr. Herbert M. King of the Loomis Sanatorium, Liberty, N. Y., will discuss the subject from the

point of view of sanatorium treatment. Dr. H. R. M. Landis, Director of the Clinical Department of the Henry Phipps Institute of Philadelphia, will present the results of dispensary treatment. Dr. W. G. Vogeler of Yonkers, N. Y., will show how discharged sanatorium patients fare best when they return to work in their original occupations. Prof. Irving Fisher of Yale University will present revised figures as to the cost of tuberculosis, and will show the economic loss from the disease and the value of sanatorium treatment in offsetting this loss to some extent.

Another subject of importance will be that discussed at the meeting of the Advisory Council, on the relative functions of the health officer, the physician, and the layman in the campaign against tuberculosis. Representative speakers in each of these groups will discuss the subject.

The chairman of the Clinical Section of the Association is Dr. Charles L. Minor, Ashville, N. C., of the Pathological Section, Dr. William H. Park, of the New York City Department of Health; of the Sociological Section, Mr. Frederick L. Hoffman, Newark, N. J.; and of the Advisory Council, Dr. Charles O. Probst, Columbus, Ohio.

INDUSTRIAL ACCIDENTS.—The Quarterly Bulletin of the New York State Department of Labor shows that during the last three months of 1911, employees were injured in accidents reported to the Department to the number of 10,322 in factories, 153 in mines and quarries, and 4,520 in building and engineering work, or a total of 14,995 in these three branches of industry alone. Of the above, 42 in factories, three in mines and quarries, and 93 in building and engineering, were known to have resulted fatally. That there is a special hazard of disease, as well as of accidental injury, in industrial occupations is evidenced by the returns under the law of 1911, requiring reports by physicians of cases of poisoning by lead, arsenic, phosphorus, or mercury and cases of anthrax and caisson disease. During the first six months, under this law which took effect last September, 122 cases were reported, five of which are known to have been fatal. These include eighty-seven cases of lead poisoning (two fatal), two of arsenic poisoning, one each of phosphorus and mercury poisoning (both fatal), two of anthrax, and twenty-nine of caisson disease (one fatal).

PERSONALS.—Dr. JOHN A. HEATLY (A. M. C. '87), of Schenectady, N. Y., has sailed for Europe.

—Dr. JOHN W. RUSSELL (A. M. C. '93), Fishkill-on-the-Hudson, has been appointed superintendent of the Matteawan State Hospital. He has been first assistant superintendent of the institution since the resignation of Dr. James V. May.

—Dr. JOHN M. GRIFFIN (A. M. C. '01), of Warrensburg, N. Y., sailed for Europe, April 22nd.

IN MEMORIAM

—Dr. ELLIS KELLERT (A. M. C. '09), has left the Bender Laboratory to become resident physician at the Huntington Memorial Hospital for Cancer Research connected with Harvard Medical School.

—Dr. ELWIN W. HANNOCK (A. M. C. '10), has opened his office at 78 South Swan St., Albany, N. Y.

—Dr. CHARLES STOVER, of Amsterdam, has been appointed a member of the Board of Trustees of Raybrook Sanatorium.

DR. HOLMES C. JACKSON.—On April 5th, Dr. Holmes C. Jackson spoke on "The Inter-Relations of the Ductless Glands" under the auspices of the Monday Night Club at Dr. Draper's home.

DIED.—Dr. FRANCIS J. STEVENS (A. M. C. '52), formerly a practitioner of Hempstead, N. H., and later a resident of Haverhill, Mass.; at one time representative of the city in the General Court and state coroner; a member of the school committee of Haverhill and for a time editor for a daily paper in that city, died at his home March 7th, from senile debility, aged 88.

—Dr. JOHN P. SHUMWAY (A. M. C. '60), formerly of Geddes and Syracuse, N. Y., but since 1890 a resident of Los Angeles, Cal., died at his home in that city, March 17, aged 75.

In Memoriam**FRANCIS JEWETT STEVENS, M. D.**

Dr. Francis Jewett Stevens, who died in Haverhill, Mass., March 6th, 1912, was born in Gilford, N. H., June 20, 1824, the son of John Sherburne and Lucy (Jewett) Stevens. He received his early education in the schools of his native town, later attending Pembroke and Gilford Academies. At the age of twenty-one years he went to Schenectady, N. Y., and secured employment as a clerk in a bookstore. Some time afterward he entered the employ of Dr. John Lucy, who was his teacher in the preliminary study of dentistry.

Dr. Stevens was admitted to the Albany Medical College in 1851, completing his medical studies in 1855, and he began the practice of medicine and dentistry at Hampstead, N. H., later removing to Haverhill, Mass., where he followed his profession for many years. Later he was in Laconia, N. H., caring for his aged and infirm father, and in 1880 he went to Boxford, Mass., where he spent the remainder of his days, with the exception of the last two winters, which, with his wife, he spent in Haverhill.

While in Hampstead, N. H., he was a member of the school committee for three years, and also served on the school board in Haverhill and was elected superintendent of the schools in Boxford.

Dr. Stevens was representative to the general court from Haverhill in 1864 and 1867, and was appointed coroner by Gov. Claflin, holding the position until the office was abolished. He was also chairman of the Republican City Committee for two years.

In 1877 he assumed the responsibility of managing the *Haverhill Gazette* and it was he who established the daily edition of the newspaper. This he gave up when he went to Laconia, N. H.

He has been a member of the Odd Fellows for sixty-four years and has also been a Mason for fifty-five years. He was given the A. & A. rite to the 32nd degree in Boston in 1864. Dr. Stevens joined St. Paul's lodge, I. O. O. F., of Schenectady, N. Y., May 19, 1846, later being transferred to Laconia and last to Haverhill, Mass. He was known throughout the State as being the dean of active Odd Fellows in Essex county. He was a charter member of both Pentucket Chapter, R. A. M., and Haverhill Commandery, K. T. He was the first master of Haverhill Council, R. and S. M., and held office almost continuously in both the Odd Fellows and Masons until a few years ago, when he retired from active lodge work, although he retained his deep interest.

Dr. Stevens was twice married, first to Susan Elizabeth, daughter of Zebedee and Lucy (Potter) Morrill, who died in February, 1873; his second wife being Lydia Helen, daughter of Daniel and Lydia (Batchelder) Gould, whom he married April 16, 1874. She survives him. There were no children.

Dr. Stevens was a charter member of the North Congregational Church of Haverhill, Mass., which connection he never severed.

His funeral services were held March 9, 1912, in the main lodge room of the Odd Fellows on Main Street, Haverhill, Mass. The three links of the Odd Fellows on his breast and the sash of the Masonic order on his grey casket, Dr. Francis J. Stevens, sixty-five years an Odd Fellow and a long-term Mason, lay in state to-day in the main lodge room of the Odd Fellows while relatives, friends and associates filed past all that was earthly of the man they knew and liked so well. Above and around the casket were huge floral pieces, tributes to the man who was for so long identified with things prominent in the city and its fraternal functions. The impressive services of the Odd Fellows were conducted by members of the Mutual Relief Lodge, with which the deceased was connected for fifty-one years. Selections from the Scripture were read and prayer offered by Rev. A. J. Derbyshire of the North Congregational Church, and the Oxford Quartette sang "Rock of Ages" and "Gathered In." Hayden B. Harris, organist at the North Church, played "Nearer My God to Thee." At the close of the service the remains were taken to Boxford for interment where he was laid to rest in the family lot amid the quiet he liked in his retiring years so well.

The bearers were all men who have been Odd Fellows for forty-three years or more and had known the deceased for over two score of years.

EUGENE M. DRAPER, M. D.

Dr. Eugene Mr Draper died at his home in Pasadena, Cal., December 28, 1911, after an illness of five days.

Dr. Draper was born in Colesville, Broome County, N. Y., in 1854, and graduated from the Albany Medical College in 1873. In his own sketch of his life, reported to the Alumni Association in 1903, he states that he opened an office in Ilion, N. Y., on the day after graduating, and continued to practice there until October, 1902. In 1884 he took a course at the New York Post-Graduate Hospital, and during the last ten years of his practice in Ilion, he was a consulting physician to St. Luke's Hospital, Utica, N. Y., and lecturer to the Training School for Nurses. On account of Mrs. Draper's poor health, it was necessary to remove to California, where he qualified for the practice of medicine, but gave his attention more largely to business pursuits. He was a member of the Methodist Episcopal Church and had deep religious feeling. He was a nephew of Dr. Hamblin B. Maben of the Class of 1857 of the Albany Medical College, and was regarded as a gentleman of high culture and refinement. He was well informed and traveled extensively at home and abroad, spending in the aggregate, several years in visiting the various cities and countries of the Old World. He wrote extensively about his travels, as well as upon medical topics. In June, 1878, Dr. Draper married Miss Elizabeth Hoefler, who survives her husband.

Current Medical Literature**REVIEWS AND NOTICES OF BOOKS**

Hospital Management. A Hand-book for Hospital Trustees, Superintendents, Training School Principals, Physicians, and all who are actively engaged in promoting hospital work. By CHARLOTTE A. AIKENS, Author of "Hospital Training-School Methods and the Head Nurse;" "Primary Studies for Nurses;" "Clinical Studies for Nurses." 12mo of 488 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$3.00 net.

This is a volume which deals with every-day questions of hospital administration. So many perplexing problems have developed in the few years in which hospitals have assumed so important a place in the life of a community that a review of the present status of hospital work may be regarded as filling a distinct need. The contributors are chosen from among the leading superintendents, visiting physicians, nurses and dietitians of prominent hospitals, and architectural and engineering questions are also discussed by experts.

It would be well for all trustees and hospital physicians to possess this manual of work for daily reference.

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Volume I. Number 1. Octavo of 133 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Published Bi-Monthly. Price per year: Paper, \$8.00. Cloth, \$12.00.

In presenting the surgical clinics of Dr. Murphy, the publishers have introduced into English surgical literature a new and attractive feature. Dr. Murphy has long been eminent as a teacher of clinical surgery and for many years has conducted at the Mercy Hospital in Chicago, on Wednesdays and Saturdays, surgical clinics designed especially for the instruction of physicians rather than students.

It is the purpose of the publishers to present one number of the clinics every two months, each number to contain about 130 pages of subject matter. The publication is based upon careful stenographic reports of the clinics revised whenever desirable by Dr. Murphy. In this way the subjects considered are presented in the most forceful and striking manner. Care is taken in the cases presented to have them as typical as possible and the aim is to have the teaching as practical as it can be made. Each case presented represents the result of Dr. Murphy's personal experience, illuminated by the essential facts drawn from the literature. The method employed is to have an interne present the clinical history and if it is not complete or satisfactory, Dr. Murphy points out its deficiencies and what the aim of the history should be. Then follows a general discussion of the subject suggested by the case, then arguments for and against the diagnosis and then the method of treatment to be employed and the mode of procedure with any practical suggestions that may be germane to the subject.

In the first number nineteen different cases are thus presented and each case serves as a type of its class. The presentation of the cases is in the forceful, striking style characteristic of Dr. Murphy and really makes very enjoyable and profitable surgical reading. Certainly this publication enables the profession to follow the surgical clinics of Dr. Murphy in detail without the necessity of a trip to Chicago and we believe that it should be and will be cordially welcomed by the profession.

A. W. E.

A Text-book of Medical Chemistry and Toxicology. By JAMES W. HOLLAND, A. M., M. D., Professor of Medical Chemistry and Toxicology, and Dean, Jefferson Medical College, Philadelphia, Pa. 655 pages, 112 figures, 8 plates. Third edition. Philadelphia and London, W. B. Saunders Company, 1911.

The first sixty pages are devoted to a brief account of the more important phenomena, including a discussion of heat, magnetism, electricity and light. A brief exposition of chemical laws is given and the chemical elements are described—including the occurrences, preparation, the physical and chemical properties of official preparations, their uses in the

arts and medicine. The toxicology, including methods of detection is described. Sections are devoted to organic and physiological chemistry and to this is added special chapters on the chemistry of digestion, the blood, milk and urine.

Although it is impossible in a single book to cover the entire ground completely, this volume contains a large store of facts usually scattered in various works; therefore, it is not only convenient for rapid reference but particularly helpful to the medical student in correlating subjects often taken up in different courses. It should also serve as a convenient brief reference book on medical chemistry and toxicology for a busy practitioner.

T. O.

Practical Electro-Therapeutics and X-Ray Therapy, with Chapters on Phototherapy, X-Ray in Eye Surgery, X-Ray in Dentistry, and Medico-legal Aspects of the X-Ray. By J. M. MARTIN, M. D., Professor of Electro-therapeutics and X-ray Methods in the Medical Department of Baylor University, in the Medical Department of Southwestern University, and in the State Dental College, Dallas, Texas, etc. Containing 219 illustrations. C. V. Mosby Company, St. Louis, 1912.

As is stated in the preface, "This book has been written for the student and general practitioner. It has been the object of the author to introduce only such features of the diagnostic and therapeutic work as will be of practical value to a large class of busy physicians who desire to gain an intelligent understanding of the specialty, but have not the time to devote to a more extended study of the subject."

The first four chapters of the work have to deal with the general principles underlying electric currents, electro-motor force, magnetism, electrostatics, etc. Then follow three chapters on apparatus. The next five chapters are devoted to descriptions of methods of applying various currents, treatment of disease, etc. In the remaining eleven chapters of the book the X-ray is discussed in its various applications to medicine, including the X-ray in eye surgery, in dentistry and the medico-legal aspect of the X-ray.

The subject-matter is presented clearly and concisely and the work is profusely illustrated. It is essentially a work for students and general practitioners.

J. M. B.

ALBANY MEDICAL ANNALS

Original Communications

THE DUTY OF THE FAMILY PHYSICIAN IN THE MANAGEMENT OF SURGICAL CASES.

Read at the Annual Meeting of the Medical Society of the State of New York, at Albany, April 16, 1912.

By J. M. L. FINNEY, M. D.,

Baltimore, Md.

Inasmuch as the subject of his address was suggested to the speaker by certain members of this Society, he feels that his only responsibility in its presentation lies in the fairness and frankness with which it is done. It is a subject which brings up questions other than the purely stereotyped, the discussion of which is timely rather than agreeable, but which are coming more and more to demand the serious consideration by the medical profession. The duty of the family physician in relation to surgical cases will be considered from three points of view: first, and most important, that of the patient; second, that of the physician; and third, that of the surgeon. It also involves three periods: before, during and after operation, each presenting its own significant problems. These duties are obviously so manifold, so varied, so important, that it is impossible to do justice to the whole subject. To go into detail would be wearisome and out of place before an audience such as this. It will be my endeavor, then, to confine my attention to a consideration of certain general propositions which, it seems to me, embody the important elements in the question. In the beginning let us look at it from the standpoint of the patient. The ideal from the patient's side is extremely easy to present: the minimum of danger, delay, disability, and distress, and at a fair cost! This demands an early diagnosis, prompt competent surgical treatment, and hardly less important, that too often utterly neglected duty, the after-care of the patient. I think everyone will admit that the welfare of the patient should always be first and fore-

most in the mind of the physician. His own interests are ever to be secondary to those of his patient. Just here, unfortunately, is where occasionally it is observed that the converse of this proposition is true, but I think it can be said without fear of successful contradiction that it has ever been the glory of our noble profession that the individual members of that profession, with few exceptions, have always been willing to sacrifice themselves and their own interests for what they conceive to be the good of their patients. There will come at once to the mind, I am sure, of every one of us, instances or circumstances in which the interests of the patient and those of the physician may come into direct conflict. I am also sure that every conscientious physician has not infrequently been haunted by the thought that some patient of his, possibly a wealthy and influential individual in the community, who wanted, and who could well afford to pay for the best, might fare better if under the care of someone else who had better opportunities, perhaps, or was better equipped than he to give the needed attention. Under these circumstances, what should a conscientious physician do? Confide his fears to the patient and thus lose first his confidence, then the patient himself, or ask for a consultation, and after having obtained an expert opinion and advice, continue in charge of the case? Or trust to luck, and bluff it out? Many questions such as these, which are of real practical importance, both to the physician and the patient, are continually presenting themselves. How shall they be answered? These general propositions apply with equal force to the whole subject of medicine in general. Have they any special significance in their relation to surgery? I think they have. From the very nature of the case, surgery must be considered as a specialty. It can only be properly done by one who has been trained from his youth up, and who has been thoroughly well grounded in the fundamentals of the science. Unless one knows and thoroughly appreciates the principles concerned in the handling of tissues, in the repair of wounds, in the causes and results of inflammation, in the characteristics and manner of growth of malignant diseases, in the principles of physical science involved in the production and reduction of fractures and dislocations, and in a hundred other points of importance, which time would fail us to mention, he cannot ever hope to get a

thorough grasp of questions which are vital to the complete understanding and proper management of surgical problems of every-day occurrence. Too much stress cannot be laid upon, or too much importance attached to the assertion which has just been made. It has been said that a surgeon, like a poet, is born and not made. Personally, I do not believe that that statement is altogether true. Unquestionably, some individuals are born with a natural aptitude for surgery, a something which has been characterized as the surgical instinct, and which every teacher can recognize at once as present in varying degrees in the medical students under his care. It is very far from the speaker's purpose to belittle in any way the art of surgery, which is of very great importance and which, in the hands of some skilled operators, has certainly become developed to the highest degree. It must be conceded, nevertheless, that however high a pinnacle the art may occupy, the science of surgery still overshadows it, and unless one is well grounded in the principles of true scientific surgery, it must degenerate into something of a trade, or a sort of sleight-of-hand performance.

My honored preceptor, the late Dr. John Homans of Boston, a man of wide experience, excellent judgment and possessing to an unusual degree, the characteristics and knowledge which we have been endeavoring to describe, remarked upon one occasion, "Any fool can cut off a leg, but it takes a surgeon to save one." This characteristically epigrammatic remark of his, very well illustrates the point I am endeavoring to make. Surgery is not alone an art. The day of the barber surgeon is over. It is a science, founded upon certain fundamental principles, without a thorough knowledge and understanding of which no man can do his patient or himself justice. Now what is the application of all this? If our premises are correct, the conclusion is obvious, namely, that no doctor, no matter who, without a thorough surgical training has the moral right to attempt to make a practice of surgery. He may succeed in doing certain minor operations or even certain major operations well, he may learn to do, by rote, certain things fairly satisfactorily to his patient and himself, and he may meet with a fair percentage of success, but sooner or later, he will meet his limitations, and in attempting to go beyond these with his limited and imperfect

equipment, some of the catastrophes of surgery are liable to happen, and then who pays the price of his ignorance and temerity? The public is beginning to understand that surgery is too serious a matter to be lightly undertaken by those who are not thoroughly trained in its proper performance. Right here let me sound a note of warning and in so doing I do not wish to be misunderstood: the tendency nowadays is toward the multiplication of hospitals, a tendency that is to be encouraged under proper safeguards. With the general proposition that a hospital is the only place in which to be sick, that is surgically sick, I am in the heartiest accord, provided only that the hospital is under proper management, and that the surgeon, for I am speaking now only of the surgical aspects of the question, is thoroughly competent to handle surgical cases. But what do we see? As a matter of fact, in my own State, and I think that is a correct index of the situation throughout the country, hospitals are multiplying in many of the smaller towns, towns of a few thousand inhabitants, where there are no skilled surgeons, and—here is the danger—where the general practitioner is tempted to assay the role of surgeon. There are two general reasons for this. In the first place, the responsibility for a surgical operation in a private house is undivided. The surgeon alone is responsible for the good or bad result, whereas in a hospital it is somewhat different. The reason for this is not easily explained, but it is true nevertheless, that in the case of a patient operated upon in a hospital, there is not the same feeling of individual responsibility upon the part of the surgeon held by the community at large, as in the first instance. In the second place, under the cover of the hospital, and in the more or less seclusion of its operating-room, the would-be surgeon is tempted to do things that he would not dare do under other circumstances. Particularly is this true, and this is no joke, where the operating-room is furnished with all the modern appliances of the up-to-date hospital. I have in mind now a certain beautiful operating-room in a hospital in a small city, the money for which was left as a legacy, a large sum to be specifically expended in the construction and equipment of this particular room, a room walled and ceiled with marble, finished with polished brass and shining glass, everything in it of the costliest description. What

is the result? It would appear to the uninitiated impossible in such a hygienic sanctuary, to commit a surgical sin, and yet one constantly sees in that operating-room heinous crimes committed against the most fundamental surgical principles and technique which ought always to be kept inviolate. And why is this? Because of those who habitually use this room, not one is a trained surgeon; they have, so to speak, just picked it up. In the gradual evolution of this palpably wrong condition of affairs the surgeon himself, or more strictly speaking, some surgeons, are not wholly blameless. There is no royal road to surgery. There is no such thing as surgery made easy. There is no trick about it than can be gotten onto in a ten-lesson course by watching the manual dexterity of some especially clever operator, and hearing him vociferously declaim against the old accepted principles of the fathers, and the newer scientific, or so-called laboratory methods. It is easy to be led by such false gods into believing that anybody can perform a surgical operation; it looks so easy and it seems so simple, as they do it. But don't be misled into the fatal error of supposing that that is all that there is to it. It means a long hard journey, years of close application and study, of mental and manual training, of observation and investigation in hospital ward and laboratory, before a man can reach in any thing like its fullest meaning, the proud distinction of bearing the title of surgeon and all that it implies. The remedy for this is easy. Do not abolish hospitals, but restrict the practice of surgery to the trained surgeon.

What has been said as to why the family physician should not operate, is rather from the standpoint of the patient. He cannot do the patient justice. Owing to lack of proper training and sufficient experience, his judgment and execution are necessarily at fault. But important as this is it seems to me that there is something to be said also from the standpoint of the physician. There is a moral question involved. A family physician is attempting to do something that, in the vast majority of cases he is not competent to do, for the reasons above mentioned. He is placing himself in a false position before the community, and is laying himself open to charges which in the present enlightened condition of the public, and certainly in some parts of the country, it would be difficult for him to disprove. There are

those in every community stimulated by shyster lawyers of the ambulance-chasing type, who are not slow to take advantage of every mistake, or fancied mistake, upon the part of the operator, and it is well, therefore, for every doctor, no matter who, before he assays the part of surgeon, to weigh well the responsibilities that are involved. He should be in a position to prove to an intelligent jury that he has given his patient the benefit of skill equal at least to that which can reasonably be expected from the average well-trained surgeon. This, it appears to me, it would be difficult, indeed impossible for the family physician to do. The thoroughly conscientious man will think twice, and go very slowly before allowing himself to be forced into this position. Of course, I am not referring to those cases of emergency surgery which every physician at times is called upon to do. In these instances, common humanity and surgical instinct demand that the best be done for the patient, and that immediately, even to the extent of a capital surgical operation, in order to relieve temporarily the patient's suffering, or to save life pending the arrival of the skilled surgeon. Then, too, this matter of operating by those not prepared for it, tends toward the lowering of moral and ethical standards in other directions. It is a great temptation to do this sometimes because the vast majority of doctors are dependent for their living upon the returns from their practice, and it frequently means a great deal for a doctor to turn over to the surgeon a good patient, perhaps wealthy and prominent in the community, in which event the surgeon, after the operation, collects a substantial fee, and the doctor often receives little or no recognition or pecuniary return for his advice and services. What then is to be the position of the family doctor in respect to the management of surgical cases? Is he simply to act as barker and catcher, whose sole function it is to inveigle into his clutches the innocent and unsuspecting individual, and then turn him over to the surgeon to be fleeced, to his own financial loss? By no means! Of course, it goes without saying that only a comparatively small percentage of the ordinary practice of the family physician has to do with surgery, so that on the whole, the effect upon his income of turning over all surgical operations would be slight; but it is the principle of the thing that should interest us rather than the practice. Right

here, of course, presents the opportunity for fee splitting or for a rake-off in some form or other. This practice needs only to be mentioned to be condemned in unmeasured terms. There need be no reason whatever for the existence of this blight upon the good name of the profession, if the surgeon, upon his part, does not in his selfish greed, exhaust the financial resources of the patient by exorbitant fees, leaving nothing with which to remunerate the family physician for his long continued and perhaps less showy services. If the principle of the Golden Rule was always applied by the surgeon, as well as by the family doctor, papers such as this would be out of place.

The position and the duty of the family physician are at all times exalted and honorable. He is the high priest of the home, and the father-confessor into whose care and keeping are committed the keys of the closet containing the family skeletons. What higher or more sacred trusts are kept by any one? The family physician can be, by wise counsel and advice, of the greatest help to the patient in the selection of a surgeon. The layman cannot be expected, indeed is in no position, to know who is the best surgeon for his particular malady, for it is an open secret that there is choice even among surgeons. Once the operator has been selected, the physician can be of the greatest help and assistance to the surgeon in the further conduct of the case. Various questions are liable to come up at once. At such a trying time the patient and his family need moral comfort and support. In my experience, it is the family and the anxious friends rather than the patient who are responsible for most of the troubles of the medical attendant. The surgeon may be an entire stranger to the patient and his friends, and little may be known by them as to his ability and skill. Reassurances upon the part of the family physician may go a long way toward allaying unnecessary apprehension. The questions of removal to the hospital, and the choice of hospital, are of prime importance. The matter of the financial circumstances of the patient, the question of the proper fee, disagreeable but necessary concomitants of a surgical operation, if frankly discussed and satisfactorily settled to all concerned, *before the operation*, would do away with a great deal of the misunderstanding and unpleasant criticism which, unfortunately, one

sometimes hears, for however unpleasant it may be so to view it, it is nevertheless when divested of sentiment, purely a business transaction between patient and surgeon. As soon as the operation has been done, whether in a private house or, preferably always in a hospital, there should be no question as to who is responsible for the further management of the case. Division of responsibility always paves the way to trouble or disaster. The surgeon and he alone should be responsible for the after-care and treatment of the patient, until such time when in his judgment the patient can be safely returned to the care of the family physician. Every operator who has had any considerable experience in private practice, particularly with operations in private houses, must have observed instances where, with the best of intentions, the family physician has unwittingly added to the discomfort of the patient and the responsibility of the surgeon, by administering favorite remedies for pain or nausea, or allowing certain articles of diet which, under ordinary circumstances, would probably be followed by satisfactory results, but after a surgical operation are absolutely contraindicated. I know of no department of surgery where there is a greater demand for the exercise of sound judgment, or where properly interpreted, experience is of more real help than in the after-care of certain classes of operative cases. This particular judgment and knowledge, born as it is of wide observation and experience in the management of such cases cannot of necessity be possessed by the family physician. In the matter of surgical dressings and the application of different forms of apparatus for the correction of deformities, etc., the same thing is true.

For every reason, then, especially in the management of the various emergencies which may arise in connection with surgical operations, the skill and experience of the trained surgeon are indispensable. Many of the unpleasant sequelæ of surgical operations, such as peritoneal adhesions about drained abdominal wounds, stiffness of joints, pressure paralyses, etc., may be avoided by the institution, at the proper time, of the proper remedies.

In spite of what has been said, one occasionally meets with the desire upon the part, especially of some not well-informed physicians, to meddle, I cannot use a softer word, with the after-care

and treatment of operative patients, a practice that should be consistently discouraged. At such times, the surgeon, and he alone, should have the responsibility and the say, but he can often receive material assistance in many ways from the family physician.

Since the general practitioner is the first one to whom the patient applies for an opinion and advice as to his particular malady, and since the earliest possible moment at which a given condition is seen and recognized is the most favorable time for the prevention of an operation, where that is possible, or for the best immediate and permanent results therefrom, it is of the utmost importance that a correct diagnosis should be made at the earliest possible moment.

Bloodgood, in a recent paper, has called attention to the difficulties in the way of early diagnosis, and to the prime importance of the family physician being so far as possible an expert diagnostician. It so often happens that by the time the surgeon is called in the golden opportunity of curing the patient is lost, and all that is left to be done by the surgeon is simply a pitiable makeshift in the way of a palliative operation. As Bloodgood justly says, "Early recognition of the disease in some cases, followed by proper treatment may make surgical intervention unnecessary." But the calling in of the surgeon should never be too long delayed. See what has been accomplished by early recognition and earlier intervention in the case of appendicitis, gastric and duodenal ulcer, cancer of the breast, the operative treatment of fractures, various forms of infection, etc. As has been well said, "Surgery should always be a last resort, but never a late one." To the intelligent discrimination and good judgment of the family doctor must be left the decision of this most important, and for the patient momentous, question.

Attention has already been called to the fact, and it is generally recognized, that the importance and responsibility of the family physician are, as a rule, not only underestimated, but inadequately compensated. There are reasons for this which will bear further consideration. During the recent period of remarkable surgical advance which was a direct result of the acceptance of the teachings of living pathology, and of the discoveries made in experimental laboratories, progressive surgeons attained an

ability in early diagnosis distinctly superior to that of less progressive internists, who were still too largely influenced by post-mortem pathology, and whose code of diagnostic signs and symptoms led but too often to a pre-mortem recognition of a previously curable lesion. Thus a surgical consultation came to be recognized in certain border line affections, as being of increasing value to the patient. Until more recently, this led to a border line warfare over what was and was not a medical or surgical ailment, with the result that physicians sometimes withheld their patients too long from surgical help, and surgeons became too prone to appropriate everything that came their way. Perhaps more potent still in the working of injustice to patients, has been the deplorable conditions that have affected medical education. If all of the individuals who in recent years have become possessed of the degree of Doctor of Medicine had been properly trained, there still would have been an over-production of practitioners. As it is, we have not only this plethora of doctors, but a still greater evil in that a large proportion of American physicians and so-called surgeons of to-day, are insufficiently trained in modern methods, and are perforce unfit properly to practice their profession.

Coupled with the unavoidable competition for the relatively few patients, has come the increased cost of living, and of practice itself. The poorly prepared have to compete with the well-prepared. Each feels that his profession owes him a comfortable living for himself and his family, and in desperation, ideals and even honesty itself at times have been forgotten.

There have been evolved two types of practitioners, one which considers itself a servant of each patient seeking only to further that individual's welfare, the other which looks upon the patient as so much commercial material to be, on the whole, treated as well as possible because that is more profitable but nevertheless to be manipulated for the greatest material gain. To the credit of the profession be it said that the former, without doubt, includes by far the larger number of the profession.

By no means is it supposed that competent and incompetent, safe and dangerous practitioners may thus be separated as sheep from goats. Such an hypothetical classification will, however, simplify a presentation of certain existing conditions without

affecting materially the validity of the argument. Moreover, it is assumed that every conscientious practitioner, whatever be his specialty, has long since recognized that no one can be all things therapeutically. Indeed, if one keeps constantly well posted in the essentials of any specialty, particularly internal medicine or general surgery, one can have neither the time nor the desire to attempt the impossible, and become a general all-around specialist. In no sense is this a criticism of the stalwart country doctor who has to meet all sorts of crises single-handed, and who does it wonderfully well.

Suppose, for the sake of a concrete example, that some of us is suffering from a surgical ailment and that this individual, you or I, seeks the advice of a physician. At once there has been demanded of this doctor three vital questions: he is in honor bound to see determined, to the best interests of his patient, a diagnosis, the nature of the corrective therapy indicated, and a selection of the one best qualified to undertake it.

In the great majority of cases, this physician is or should be able to recognize the ailment as surgical, even if its exact nature is indeterminate. Grant, if you will, that the affection is obscure and a medical consultation appears advisable. Who shall be called? Would we, you and I, desire more the best available diagnostician, or the one who will directly or indirectly recompense our doctor for this favor, charging us enough extra to make this commission profitable to all but the one most concerned?

With or without this consultation, a surgeon remains to be chosen. Shall our doctor who may dabble in surgery hold on to us for the fee, when he knows or should know, that he is incompetent? Or shall he refer us to the man who pays the highest straight rebate? Perhaps we may have unconsciously too great delicacy for such crude methods and would prefer, in our ignorance, that they be tempered by disguise as long as we have to be shorn. Our doctor surgically undertrained might be chosen as an assistant, or an anesthetist, or the surgeon might say to him later "My fee is (x) dollars, make any settlement you can, and keep the difference." Or possibly, do we think, you and I, that we should prefer the surgeon who is most cer-

tain, all things considered, to get the best results? The excuse is made that the best available man also pays the best rebate.

The moral deterioration that attends rebating, both in the giver and the receiver, is stronger testimony against this debasing practice than all the other ethical arguments that can be advanced. It makes both unfit properly to practice what we like to believe is the highest of professions. Worse from the patient's standpoint than the inevitably increased expense, is the real danger of ill-advised, poorly executed and often wantonly needless surgery, for which the large army of neurasthenics becomes an easy prey.

So much for the diagnosis and selection of a surgeon. There comes next the physician's duty at the time of operation. Whenever possible, he should be with the patient, first because if his relations to his patient are as they should be it will give that individual increased confidence, and a sense of security and comfort, thus improving the chances, because as insisted upon by Crile, the psychic influence upon anesthesia and convalescence is a factor too significant to be neglected; second, because no physician can afford, for his own sake, to miss any opportunity to control his diagnosis, and visualization of the underlying pathological conditions, by seeing for himself the actual state disclosed at operation, not if he is conscientious in his desire to improve in power of diagnosis, in more accurate interpretation of abnormal physiology, and thereby in rational therapy. Moreover, he should be present to aid the surgeon when occasion demands, in interpreting the patient's history, helping greatly thereby in a determination of the wisest measures to be undertaken. He can thus the more intelligently render service in the after-care, which the purely operative type of surgeon has too readily relegated to other hands as essential or superfluous, a practice that cannot be too strongly condemned. Too frequently it has been inefficacious, chiefly because both physician and surgeon were too self-satisfied to learn what was essential.

There never should be any contest as to whether an affection is or is not purely surgical, and in no case has an intelligent coöperation been productive of other than gain to the patient. No case is purely surgical, when the physician and surgeon as well are, so to speak, on to their job and have a true professional

interest in their patient. This kind of attention can never be adequately paid for in money.

The erroneous notion that surgery is principally carpenter work, and limited to the operating table, finds two general exceptions, both lay and professional. The operating room assuredly is the place where a surgeon's judgment and stamina may be put to the most spectacular test, and it may be the period of his gravest responsibility. His judgment, if it is not based upon sound pathological and physiological foundations, may lead him into fatal error, no matter what his pluck may be and both may be subjected to the severest test in a given case, in refusing operative intervention. His responsibility to the patient lasts so long as the untoward effects of his therapy persist and that sometimes means a very long time; it may be a life time. An appreciation of the full significance of this thought, ought at all times to sober the judgment and restrain the enthusiasm of the would-be operator.

During the period of operative recovery, that is, until the wounds have healed, and while the patient is essentially surgical, the physician can be of great help to the patient by timely personal attention and encouragement, and by keeping in touch with progress be enabled to render the greatest possible assistance during that more protracted, and frequently most distressing period after leaving the hospital, and before recovery is complete, a period that frequently follows even trivial operations and the most perfect healing. If the encouragement and support which a physician may give in case of any purely surgical complication may be of value to the sick, his aid to both patient and surgeon when some complication arises which is medical, may be indispensable. Up to the time a patient ceases to be surgical, the physician must rely upon surgical experience to dominate the treatment, but at that time he should take full charge, and by previous personal observation should be in a position to direct the after-care to the utmost advantage.

Having kept, from the beginning, in touch with each detail, a physician who understands the processes of physical and psychic repair, as well as they can be understood, is in a position to supplement surgery, and frequently is able not only to hasten a return to normal, but may even be directly instrumental in mak-

ing such a recovery possible. Here come tests of patience that try the soul, not to be dodged with flimsy excuses, but to be met as part of the day's work. Frequently a change is indicated, and always is there a temptation to advise it in order to escape from these forlorn nervous beings, who haunt one's dreams when they are not complaining in person.

Many such individuals find their way to a sanatorium, an easy haven, but too often like other easy things, rather harmful than otherwise, not that there do not exist good sanatoria, nor that certain individuals would not be benefited by proper sanatorium treatment. These institutions are all expensive, usually beyond the possibility of many patients, and many who can afford such luxury had perhaps better learn self-control elsewhere.

Intelligent advice and encouragement, physical, mental and moral, can be given almost anywhere by the well-informed family doctor, and this is frequently all that is needed by surgical cases, with the ever available assistance of good Father Time.

The question of fees has always to be considered, and frequently the statements of the family physician are the sole source of information upon which they are based. Surgical fees may seem out of all proportion to the services rendered, and to our shame be it said, that too often this is true. On the other hand, a surgeon is paid not merely for the judgment, skill and responsibility involved in a particular operation, but rather for his established ability to recognize and to cope with the unexpected. It has been said that it is always the unexpected that happens. How true this is in surgery, and how often it happens that when outwardly an operation which promises to be simplicity itself, once started, may disclose conditions that tax to the utmost the most resourceful. The temperament and training represented in a good surgeon deserve compensation usually in excess of the returns. The physician, too, is wont to complain that he is underpaid. This is no doubt true in the majority of cases. If he makes an early diagnosis and stands by his patient for the patient's sake, manifestly he is entitled to generous consideration. The surgeon should make it his duty to see that he gets it, first, by not robbing the patient and then by seeing that that individual understands the personal value of the services rendered by the physician. No rebates, combined bills or mutual

understandings are necessary. Frankness and square dealing alone will suffice to right most of these evils.

Do not gather from the foregoing that the speaker has any desire in any way harshly to criticise any special individual or group of individuals. It is part of our duty to recognize facts as they are and openly to consider them and their bearing upon the public health. One frequently hears expressions of surprise because medical men as a body appear to exert so little influence upon public opinion. Is it any wonder, when we know that there are good and sufficient reasons why we do not always deserve public confidence? As a profession we stand convicted before the public, no matter what our pleas may be as individuals. It is our duty to find and to apply a cure for these ills, as well as others affecting the public health of the body politic. Fortunately, the diagnosis is easy and a specific remedy is at hand.

Insufficient education and training have made possible the tremendous over-production of poorly equipped individuals, technically M.D.'s, potentially charlatans. The public is rapidly awakening to conditions, and will presently deal drastically with us if we do not clean house ourselves.

The cure is to come by enforcing the highest standards in medical ethics, in medical education, advanced requirements for admission to medical schools, rigid adherence to equally high standards for graduation, and it is to be devoutly hoped, an added hospital year as a prerequisite to practice.

The obligation of medical faculties is not merely to advertise university methods of education, but to see to it that their promises are literally fulfilled. Students should be given instruction not only in the most modern methods as applied to all branches of medical art and science, but should also be shown the most exact examples of professional honor. Morality can be taught by nothing as well as by example. Possibly the most malign influence exerted on medical students at the present time is the ubiquitous commercialism manifested, however unwittingly, by their professors, who neglect their moral obligations to their students and to investigation, in order to make money or political capital out of their patients, or of opportunities that come to them because of the very positions which they are holding, and by this very fact perhaps, keeping out of the same positions

probably more capable men, who would stand up to sane and honest idealism.

It is our duty, yours and mine, to see that medical education is limited to those institutions that can give proper opportunities to their faculties and students, and who have sufficient backbone to hold both strictly to account. We should also strive to get public sentiment aroused in support of this necessary advance.

The signs of the times are fortunately most encouraging, a widespread increased intelligent interest is being taken in educational problems. Particularly is this true of medical education, with a resulting increase in moral and material support. Encouraging too is the growing number of medical schools that are fighting against tremendous odds to modernize their equipment and methods of instruction, to foster research and idealism, and to turn out only such graduates as any one of us might welcome in case of sickness, and to whom we can cheerfully intrust the future maintenance of the highest medical standards, and the progress of medical science and practice in these United States.

THE PATHOLOGY OF THE LUNGS.

*Read before the Medical Society of the County of Albany,
December 12, 1911.*

BY ELLIS KELLERT, M. D.,

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Time does not permit a consideration of all the various pathological conditions of the lungs. As practitioners of medicine, pulmonary tuberculosis is by far the commonest chronic condition which we encounter and with which we shall deal.

Tuberculous lesions of the lung are similar to tuberculosis elsewhere in the body. The tubercle bacilli by their presence will excite inflammatory changes which may be grouped into three stages. First — a *productive* stage in which there is a proliferation of the fixed connective tissue cells, secondly — an *exudative* stage in which there is an emigration of leucocytes about the organismis and lastly — a condition of *necrosis* or death of tissue. In this manner a tubercle is formed and its structure will usually depend upon the number of bacilli present and the intensity of

the toxin produced. There are two types of tubercles, the lymphoid-tubercle which is composed mainly of small spheroidal cells and the *polyhedral-celled* tubercle composed of larger polyhedral cells. Both of these forms may be combined with *giant* cells. These are formed during the stage of active cell proliferation either by nuclear division without division of the cell protoplasm or by a coalescence of the bodies of cells. New tissue forms in and about the tuberculous focus and blood vessels may develop. Although the microscopical changes which take place are few and simple, the gross appearances are exceedingly variable.

Miliary tubercles are small irregularly-shaped nodules, grey and translucent if small or opaque and yellow if large. The damage to the tissue which takes place results in *coagulation necrosis*, a condition in which the cell bodies are shiny, translucent, altered in shape with a disappearance of the nuclear chromation. The necrosis begins first in the centre of the tubercle and progresses outward. The nuclei fragments disappear or fail to take the stain. The cells and stroma form a granular mass which upon disintegration results in *cavities*. In the further progress of coagulation necrosis, the tubercles become opaque with yellowish-white centres; finally dense fibrous tissue encapsulates the foci and repair is thus brought about.

Slide No. A-10-6 is from a healed tuberculous lesion of the apex and in the section can be seen the dense fibrous tissue which has taken a diffuse pink stain.

Specimen K-10-125 is the apex of a lung showing marked puckering and numerous firm fibrous tags adherent to the pleural surface.

The tubercle bacilli enter the lungs through the air passages or the blood and lymph vessels. If through the vascular system, they are usually brought from a tuberculous focus in some other part of the body. The numerous air spaces, connecting air-passages and lymph channels, especially favor the distribution of tubercle bacilli. An exudate of fibrin, leucocytes and epithelium, is permitted to collect in the air-passages in large amounts, the thinness of the walls of the air chambers favoring disintegration.

Miliary tuberculosis of the lungs in the acute form occurs as part of a general tuberculosis and both lungs are involved. The tubercles, either singly or in groups, occur in the parenchyma of the lung or along the septa, bronchi, blood vessels and visceral pleura. They may be small or large and necrotic. The type of tubercle which consists mainly of inflammatory exudate, occurs most frequently in children and rapidly undergoes necrosis. These contain large numbers of tubercle bacilli.

Slide numbered 72 is from a case of miliary tuberculosis of the lung. In this section there can be seen about a dozen tubercles. They are quite distinct and the surrounding alveolar spaces contain no exudate.

Specimen Lu. 4 is a case of acute miliary tuberculosis in a child. Here the different lobes will be found to contain innumerable minute greyish tubercles.

Specimen Lu. 10 is a case of acute miliary tuberculosis in an infant. Here large numbers of greyish tubercles can be seen on cross section and also covering the outer surface of the lung.

In the chronic form of miliary tuberculosis, the tubercles may extend and coalesce forming large areas of consolidation, or the tuberculous foci may not become very necrotic and will be converted into dense fibrous tissue with a calcified or necrotic centre. These encapsulated areas may or may not contain virulent tubercle bacilli.

In tuberculous bronchopneumonia, the walls of the small bronchi and adjacent air spaces are involved. This may occur through inhalation of the organisms, from lesions at the apex, from tuberculous bronchial lymph nodes, or from blood and lymph vessels. On cut section, the lung in tuberculous bronchopneumonia presents yellowish white consolidated areas with necrosis and inflammation of the bronchial mucous membrane together with a varying amount of exudate. Frequently organized tuberculous tissue causes a thickening of the bronchial walls with obliteration of the adjacent air spaces. By a process of extension, larger areas of the lung become involved. These areas are dark-blue with greyish central portions containing obliterated blood vessels. Necrosis and ulceration follow with the formation of cavities surrounded by consolidated lung tissue. The ulceration

which takes place in the necrotic bronchial walls may also lead to cavity formation. Frequently large areas of tuberculous bronchopneumonia coalesce so that entire lobes or portions of them will become consolidated. Microscopically, these consolidated areas are seen to be composed of necrotic tubercle tissue with obliteration of the air spaces.

Specimen K-10-171 (1) shows several small cavities at the apex and numerous tuberculous areas scattered about. In the lower lobe there is seen an area of tuberculous bronchopneumonia.

In diffuse exudative tuberculous inflammation, we have two varieties, acute and chronic. In the acute form, large areas become the seat of an exudate consisting of epithelium, fibrin and pus. This upon becoming necrotic gives to the lung a dense mottled, greyish appearance. Extensive disintegration leads to the formation of large cavities which may be filled with a puriform material containing enormous numbers of tubercle bacilli. Under the microscope will be found a smear made from such a cavity in a case which we autopsied but a short time ago. As will be seen, the greenish pus-like material which filled the cavity consists almost entirely of tubercle bacilli together with a few cellular elements. This preparation permits one to readily appreciate what it must mean to have the contents of such cavities scattered about our walks.

In the chronic condition, there is a gradual formation of the exudate with tuberculous thickening of the air spaces associated with fibrous growth and cavity formation. The exudate is most likely to be serous or serofibrinous and the consolidated areas appear translucent and gelatinous.

The slide labelled C-66 is a section of lung showing a condition of tuberculous pneumonia. Throughout the section can be seen numerous tubercles while the alveolar spaces are filled with an exudate consisting of epithelial cells, white blood cells, chiefly polymorphonuclear leucocytes, fibrin and a few red blood cells.

Cavity formation in tuberculosis may occur by progressive necrosis and disintegration of the thickened walls of the bronchi and adjacent lung tissue. Cavities may also be formed by similar alterations in the areas of necrotic tissue involving portions of

whole lobes. These cavities may communicate with one another as well as with the bronchi.

Specimen K-10-171 (2) is a left lung showing numerous greyish tubercles and at the apex is a cavity $5 \times 4 \times 3$ cm. with greatly roughened walls.

At first, new fibrous tissue may form about the cavities which become lined with granulation tissue. Here a rapid multiplication of tubercle bacilli takes place and these may be expelled with the sputum or carried to other parts of the lungs. Hemorrhages frequently occur from the blood vessels which line the walls or lie across the cavities.

Specimen L-11-31 is a most interesting one and for which the laboratory is indebted to Dr. Ward. This is a portion of the upper left lobe cut transversely and shows a cavity $5 \times 4 \times 4$ cm. in diameter which is partially filled with blood clot. A very detailed history of the case was published in the ALBANY MEDICAL ANNALS for November, 1911. The entire lung showed tuberculous areas and as pointed out by Dr. Ward, the unusual features of this case were the complete involvement of the lung with cavity formation and without clinical signs up to within a few days of death. The first symptoms were hemorrhages consisting of darkly colored blood.

Specimen K-10-186 is one-half of a lung of an adult. The lobes here are intimately united as frequently happens in tuberculosis. There is an intense anthracosis and in the upper lobe is a phthisical cavity measuring 9×6 cm. in diameter. The long drawn out suppuration of the walls of the cavities may be due to the presence of pyogenic organisms carried in through the air passages.

DIAGNOSIS OF DISEASES OF THE LUNGS,
BY ANALYSIS OF SYMPTOMS ACCORDING TO PATHOLOGICAL CAUSE.
*Read before the Medical Society of the County of Albany, December
12, 1911.*

BY C. B. HAWN, M. D.

Diagnosis is the naming of cause. Symptoms are effects. In disease, altered physiology, or pathological conditions are the causes, giving rise to symptoms, considering the term symptoms

in its broadest sense, and including, under that head, all the abnormal features which present. Pathological lesions vary in their extent and in their effect, and it is sometimes difficult to explain by one lesion, all the symptoms presenting in a given case; however we should guard against the errors incident to a multiple diagnosis, and make an earnest effort to logically explain, at least the major symptoms, by one definite lesion.

Symptoms of pathological processes arising in the lungs lend themselves particularly well to logical analysis, and it is with the idea of illustrating that fact, that the accompanying charts are presented. Of necessity, these charts are much condensed, and a great deal of value is omitted, because of the limited space and time at my disposal.

In Chart I, under symptoms are included both subjective symptoms and physical signs, including even such changes as might be found by blood examination and blood culture. These symptoms have been set down in the order in which they would be most conveniently elicited, and not in the order of relative importance. Under pathology, the explanation of the causation of symptoms is purposely made extremely broad and of necessity concise. A word of explanation may aid a proper understanding of some of these somewhat vague statements.

Dyspnoea may be caused by an insufficient supply of air, an insufficient supply of blood to the lungs, or by a lack of proper facilities for the exchange between the blood and air of carbon-dioxide and oxygen. Fever always accompanies infection, while chill often marks the beginning of infection, or the sudden invasion into the circulation of bacteria, or their toxins. Loss of weight may be caused by lack of nutrition, or a too rapid waste of body tissues, due to toxæmia or fever. In general, it is a true tissue degeneration. The pulse rate may be increased by toxæmia or decreased by overwork, or may be altered by mechanical causes, as pressure upon the heart by tumor mass, consolidated lung, or exudate into the pleural cavity; especially if these conditions are present in the left chest. Chest movements may be diminished on the affected side by presence of tumor, consolidation of lung tissue, exudation into the pleural cavity, or the chest may be held rigid in an effort to avoid movements causing pain; especially if the pleura be involved. Chest movements may be in-

creased on the sound side by an effort at compensation. Altered resonance and altered fremitus means a change in physical character of the sound conducting tissues, and may be produced by increased air content of lung tissue, consolidation, exudation, or tumor. Fluid obtained by aspiration may come from cyst or abscess of the lung or pleural exudate. Blood examination may show an increase in the number of leucocytes, as in most inflammatory conditions except tuberculosis, or evidence of secondary anaemia, as in carcinoma. Blood culture may reveal the presence of a bacteraemia as in lobar pneumonia.

In Chart II are set down numbers which refer to Symptoms in Chart I. These symptoms, by analysis and exclusion of pathological cause, lead us to a logical diagnosis of some of the commoner diseases of the lungs and pleura. One such case will suffice to illustrate this method of diagnosis by analysis and elimination.

Referring to Chart I for explanation of pathological cause, let us suppose a case which presents to us the following symptoms:

Pain, caused by pressure upon, or inflammation of nerves;

Cough, a reflex attempt to free the air passages of irritant or obstruction;

Fever, an indication of inflammation due to infection or reaction of tissue to injury;

Diminished chest expansion, may be due to consolidation, or the chest may be held rigid to avoid pain;

Localized diminished resonance, may mean localized consolidation, tumor, or localized pleural exudate;

Friction rub, means inflammation and consequent roughening of pleural surfaces.

Now, if we eliminate by our examination, consolidation of any form which might cause diminished expansion, or localized dullness, and find no râles or change in breath sounds, we are led to the logical diagnosis of plastic pleurisy; which is a localized inflammation of pleural surfaces, accompanied by fever, exudate, and roughening of pleural surface, and by involvement of nerves, causing pain, cough, and a rigid chest.

CHART I.

	SYMPTOMS.	PATHOLOGY.
Subjective,	1. Dyspnoea,	Interference with aeration of blood.
	2. Pain,	Inflammation of, or pressure upon nerves.
	3. Cough,	Reflex from irritation.
	4. Expectoration,	Increased secretion or exudation.
	5. Hemoptysis,	Rupture of blood-vessels.
	6. Fever, chill,	Infection and toxæmia.
	7. Loss of weight,	Tissue degeneration.
	8. Altered pulse rate,	Toxæmia, or mechanical interference with heart action.
Objective,	9. Altered chest movements,	Mechanical interference, or forced rigidity to ease pain.
	10. Altered resonance, fremitus,	Exudation internal, or external to air vesicles, or passages.
	11. Altered breath sounds,	Dilatation, compression, or consolidation of air vesicles or passages.
	12. Râles,	Exudation into air vesicles or passages.
	13. Friction rub,	Gliding of inflamed and roughened pleural surfaces.
	14. Fluid by aspiration,	Increased secretion or exudation into pleural cavity, or lung tissue.
	15. Blood changes,	Disturbance of hemogenic balance.

CHART II.

SYMPTOMS.	DIAGNOSIS.
2, 3, 6, 9, 10, 13—	Plastic pleurisy.
1, 6, 9, 10, 11, 14, 15—	Pleurisy with effusion.
1, 9, 10, 11, 14—	Hydro-thorax.
1, 8, 9, 10, 11—	Pneumo-thorax.
1, 3, 4, 10, 11, 12—	Asthma.
1, 3, 4, 10, 11—	Emphysema.
3, 4, 6, 1, 10, 11, 12, 15—	Broncho-pneumonia.
6, 1, 3, 4, 10, 9, 12, 15, 8—	Lobar pneumonia.
3, 1, 4, 5, 6, 7, 2, 8, 10, 11, 9, 15—	Tuberculosis.
1, 10, 11—	Infarct.
3, 4, 6, 11, 15, 14—	Abscess.
7, 10, 11, 1, 15, 14—	Growths.
3, 4, 1, 5, 7, 6, 10, 11, 12—	Cavity formation.

THE ROENTGEN RAYS IN EXAMINATIONS OF THE CHEST.

*Read before the Medical Society of the County of Albany,
December 12, 1911.*

BY ARTHUR F. HOLDING, M. D.

The Roentgen Rays have proved themselves of value in examining the chest for

- (1) Diseases of the lungs,
- (2) Diseases of the heart and aorta,
- (3) Diseases of the mediastina.

The basic principles upon which the excellence of this method is based are:

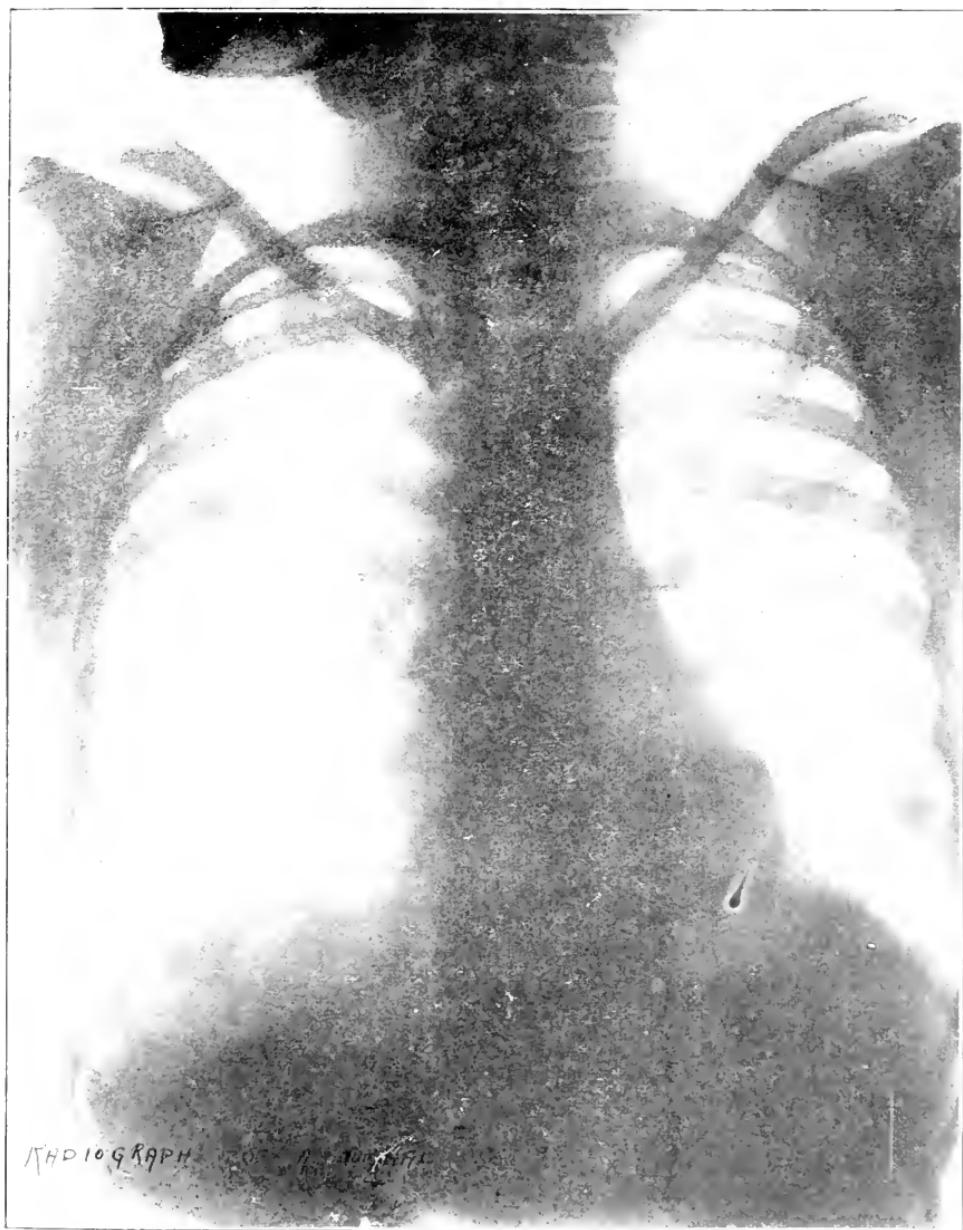
- (1) The photographic plate is more sensitive to impression than the typanum,
- (2) The retina is more sensitive to impression than the typanum,
- (3) Impressions gained by vision are more accurate and trustworthy than those obtained by hearing,
- (4) Physical diagnosis based upon the acuteness of one's "*tactus eruditus*" and one's drum-membrane assisted by a stethoscope is not as sensitive and therefore not as accurate as such diagnosis reinforced by examinations made by employing the X-Rays in accurately projecting a registration of the differences in the density of the tissues on a sensitive emulsion and interpreting the same by one's "*visio crudita*."

At the present time the prevalence of tuberculosis and the tremendous prognostic importance of the detection of incipient tuberculosis makes the study of that disease of the chest overshadow the importance of the other less common and less curable diseases, so we will consider that disease first.

One readily appreciates that the lung parenchyma with its normal air-filled alveoli encased in its "heavier-than-air" bony thorax and musculature, bounded below by the dense liver, presents an ideal field for the application of the X-Rays, rendering possible a sharp differentiation by contrast between the lung alveoli, the heart, the liver, and any pathological infiltration in the lung parenchyma. It is easy for anyone with experience to recall cases of, and to appreciate what extensive lesions of, the

To Illustrate Dr. Holding's Article on "The Roentgen Rays in
Examinations of the Chest."

Albion, N.Y. Hospital June 1912



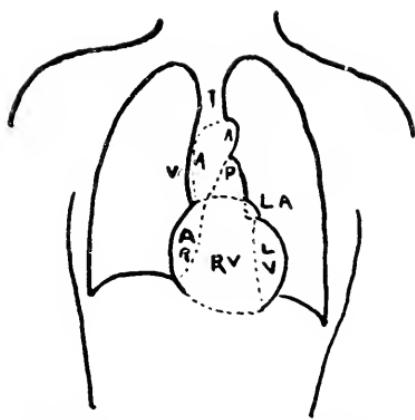
Radiogram of Normal Chest

To Illustrate Dr. Holding's Article on "The Roentgen Rays in
Examinations of the Chest."

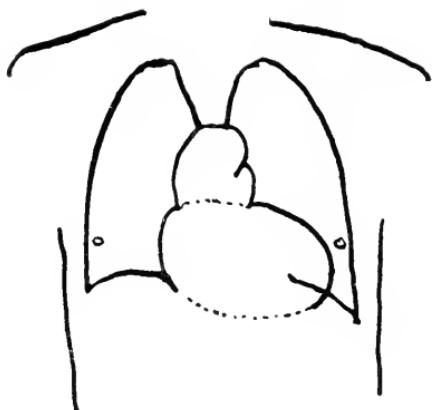
Albany Medical Annals, June, 1912



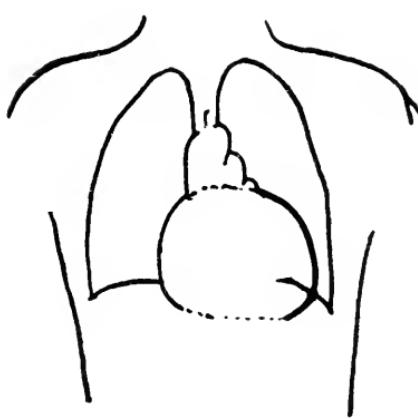
Incipient Tuberculosis without Physical Signs



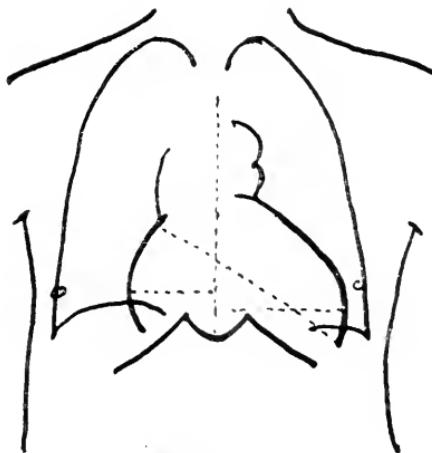
Schematic Orthodiagram of Heart
(Normal)



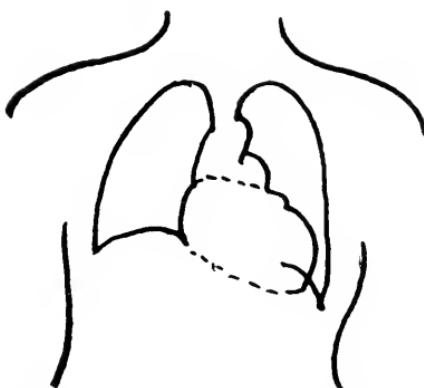
Aortic Regurgitation



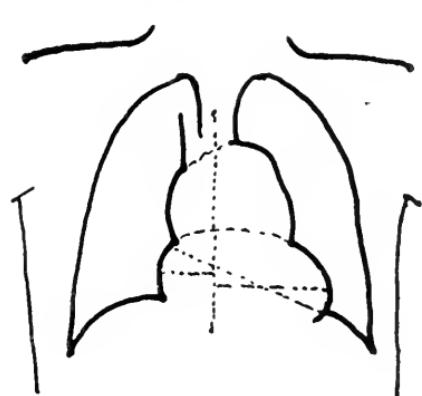
Mitral Regurgitation



Myocarditis



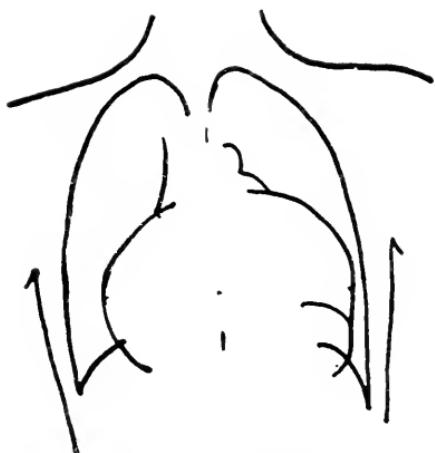
Mitral Regurgitation and Stenosis;
Aortic Regurgitation



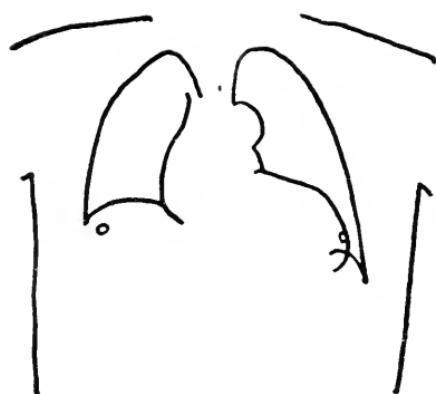
Dilatation of the Aorta

lungs can sometimes exist without giving any appreciable sign, because of overlying healthy air vesicles.

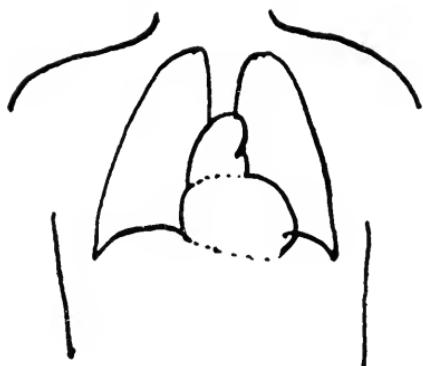
In emphysema the air vesicles are more pervious to the X-Rays and therefore are hyper-transparent. In tuberculosis the conglomerate tubercles cast round shadows on the usually clear areas of the lung, while the congested arteries and veins, infiltrated lymphatics and bronchioles leading to the areas involved cast a distinctly "linear detail" in the areas between the conglomerate tubercles and the lung hila. Furthermore the site of primary invasion in the lung is not at the apices, as so long taught in text-books, but is in the lymphatic glands at the hila of the lungs, and thence one can trace the spread of the disease in radiating lines of infiltration to the apices or whatever part of the parenchyma may be involved. If these lesions involve the pleura in the slightest degree there will be appreciable limitations or irregularities of movement of the diaphragm on that side of the chest. Should an effusion develop this makes the difference in the diaphragmatic outline more marked. Should the process have progressed to a stage of softening of the conglomerate tubercles and cavity formation, the central area of air shows in marked contrast to its confining walls of breaking down tuberculous infiltrated lung tissue. While the *single radiograph* will give one all this wealth of information the *stereoscopic radiograph* of the chest will add much to the orientation of the lesions and the definition of their extent. This is particularly true in such obscure cases as interlobar empyema, where it frequently occurs that the diagnosis in a long history of an occult pus infection will be cleared up by a Roentgen examination. In several cases this has been not only true, but furthermore the pus was so deeply located in the thorax that the aspirating needle failed to locate pus until it was directed into the abscess according to orientation obtained by stereoscopic radiography. It is an essential point in the surgical technique of evacuating such a collection of pus, to leave the aspirating needle *in situ* and have the surgeon cut down on the needle as a guide, otherwise the operative intervention may fail to drain the pus. The fact is that in good radiographs of the chest there is so much detail shown that the interpretation of shadows, which are pathological and those which are physiological, becomes a matter of primal



Upward Displacement of Lungs
and Apices in Mitral
Regurgitation



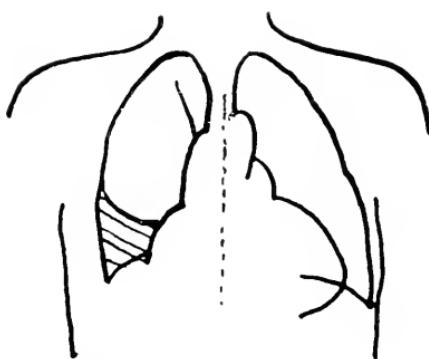
Right Diaphragm High; Case of
Tumor of Liver



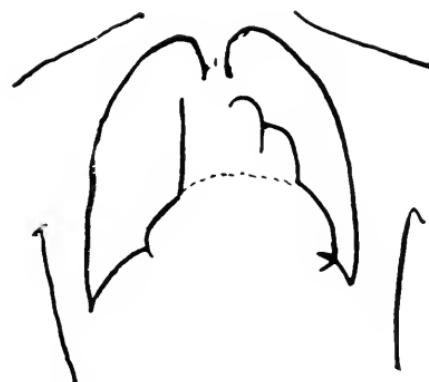
Aortic Stenosis



Left Diaphragm Elevated;
Diaphragmatic Hernia



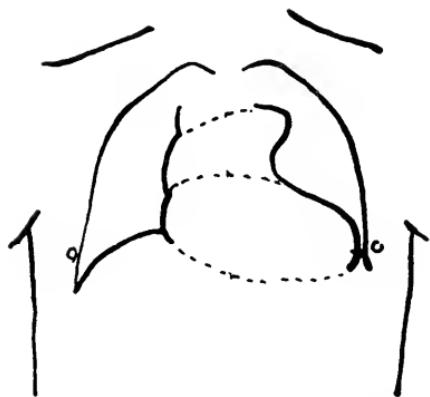
Ruptured Compensation and
Tricuspid Regurgitation



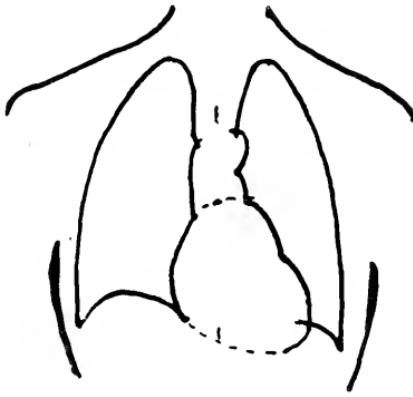
Persistent Ductus Arteriosus
(Botalli)

importance. In this application all the judgment obtainable from a clinical, a pathological and a common-sense standpoint should be made available. "The correct interpretation of the plate is more difficult than the making of the plate." (Pfahler.)

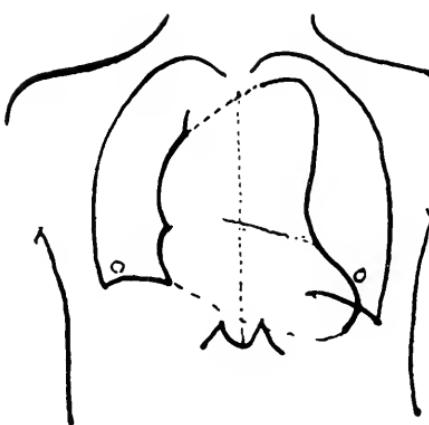
The Roentgenographic examination of cardiac diseases has been perfected in Germany much more than in this country.



Aortic Regurgitation; Dilatation
of Aorta



Mitral Stenosis



Aneurysm of Aorta

Each different form of heart lesion produces a more or less characteristic variation in heart outline, according to the different valves affected. It has been shown that teleroentgenography and orthodiography outline the heart more accurately than percussion can. To illustrate the variations in heart outline I call attention to the accompanying diagrams made by

Groedel after the study of many cardiac cases at Bad Nauheim, Germany. In the Roentgenographic examination of the heart and great vessels, fluoroscopy is absolutely imperative to arrive at trustworthy conclusions. This fluoroscopy can and must be done with safety to the patient and to the observer. Fluoroscopy is particularly essential in differentiating mediastinal tumors and aneurysms. Other forms of tumors that must be borne in mind in examining the chest are persistent thymus glands and intra-thoracic thyroid glands. These are common enough to make it necessary to recognize them when interpreting radiographs of the chest.

SURGERY OF THE LUNGS.

*Read before the Medical Society of the County of Albany,
December 12, 1911.*

By JOHN H. GUTMANN, M. D.,
Lecturer in Surgery, Albany Medical College.

It was in the seventeenth century that discoveries in chemistry and physiology were made, which placed a new light on the problems having to do with the function of respiration. The fundamental theories originally pronounced by Galen, which received a set back through the erroneous views held by many of the mechano-physiologists were again accepted as embodying sound facts and principles and received further confirmation through the efforts of Van Helmont and Boyle.

Thus after a period of 1600 years impetus was given anew to the study of lung physiology through the interdependence of the allied sciences, physics and chemistry; a co-relationship which even at the present time is solving many of the problems of lung surgery and without which the progress of the last ten years would have been quite impossible.

Vesalius demonstrated that the blood could be aerated by artificial means, and in 1667, Hook sustained the life of a dog for one hour by continuous inflation by means of a bellows, showing that the lung movement as a mechanical process was not an essential feature of respiration.

In the eighteenth century the theories of respiration were in a very unsatisfactory state. Periods of uncertainty and dis-

satisfaction prevailed, at which times much was produced which gave erroneous explanation to the facts deduced by such original workers as Black and Haller. Lavoisier's conception of the principles of oxidation and his promulgation of the essential facts of the modern theories of respiration clarified the situation and placed the matter on a firm basis.

For many years the inflation of the lungs in physiological animal experimentation was carried on but no one seemed to give the problem its right values and apply it to the needs of human beings. The prevention of pneumothorax, the preservation of the function of the lungs, both at operation and subsequently were experimental problems which received very incomplete and unsatisfactory solutions until the close of the last century. The propulsion of the blood through the lungs by the right heart and its transmission onward by the respiratory action were as important to the integrity of the lung function as the intimate relationship of the lungs themselves to the proper functionation of the heart and its surrounding organs. Because of this interdependence of the thoracic organs and the peculiar mechanical apposition of the lung covering to the chest wall, surgical intervention was restricted and remained undeveloped for many years. Although peritoneal lesions received attention and abdominal and general surgery developed and flourished after the discovery of anaesthesia and the recognition of asepsis, the chest cavity resisted the efforts of men otherwise skilled in surgical procedures. Intrepid operators like Bardeleben, Roser and Billroth showed the greatest respect in attacking the pleura. Krause and Tuffier sought to overcome the dangers of pneumothorax by stripping the pleura from the chest wall and working extra-pleurally. Delorme circumvented the same danger by encouraging the formation of adhesions; while Roux tried the two-stage method of sewing the pleura to the chest wall. Until the advent of the modern inflation methods, none dared invade the region circumscribed by the pleural investment.

In 1897, Tuffier inflated the lungs by inserting an intra-laryngeal tube and later Kuehn and Loetsch provided a double tube for back flow. Quenu accomplished the same inflation by blowing air into a helmet or box in which the head of the animal was contained. Volhard, Hirsch and others demonstrated that the

oxygenation of the blood could be maintained by a constant stream of oxygen directed at the bifurcation of the trachea.

Matas of New Orleans was one of the first to use the Fell-O'Dwyer apparatus with pressure manometer, filter and chloroform attachment and this instrument was successfully used by Parham in a case of sarcoma of the chest wall in 1898.

The greatest advance was accomplished by Sauerbruch, who at the suggestion of Mikulicz took up for investigation those features which had for a long time blocked successful lung surgery. These questions were:

1. The prevention of collapse.
2. The continuation of respiration.
3. The prevention of mediastinal displacement.

In the course of his work, Sauerbruch had constructed a negative chamber by means of which he made extensive animal experiments, the result of which provided the surgical world with data sufficient to place thoracic surgery on a practical basis. Mikulicz himself performed the first operation on a human being in a Sauerbruch negative cabinet in 1904. The Sauerbruch chamber consists of a large compartment or room, from which the air may be withdrawn to such a degree as to provide a negative pressure. The body of the patient to be operated on is contained within this negative compartment, the head projecting through a port hole in the wall, at which point the neck is surrounded by a rubber cuff or collar. In this part of the country this method finds its most complete and elaborate installation in the new operating pavilion for thoracic surgery at the German Hospital in New York, erected under the direction of Dr. Willy Meyer, who had been conducting experiments in thoracic problems at the Rockefeller Institute for some years past. This pavilion provides an aseptic operating room with a universal differential pressure chamber, consisting of a negative chamber with a positive differential cabinet within and a positive differential pressure cabinet in the septic operating room. The entire equipment is most modern and complete and efficient to the smallest detail.

Contemporaneous with Sauerbruch, Brauer invented a pressure machine consisting of a motor and bellows springs which supplied air to a casket in which the head of the patient and

the arms of the anaesthetist were contained. The anaesthesia was supplied from a Roth-Draeger apparatus. Tiegel and Henle applied the positive pressure by means of a mask fitting closely to the face of the patient while Loetsch used a mask and at times an intubation tube.

In the course of experiments on animals, breathing with the Bauer overpressure apparatus, Meltzer and Auer, in 1909 again noted the fact that under certain conditions respiration could be carried on, by continuous inflation of the lungs, without artificial respiratory movements whatever. As I have said this fact demonstrated by Hook in 1667 had received additional confirmation from the efforts of Nagel who maintained the life of curarized pigeons by sending a stream of air through the humerus which in birds is connected with the air sacs. The intra-tracheal insufflation method of Meltzer and Auer was carried on by introducing a tube into the trachea to within a few centimeters of the bifurcation. This tube, smaller than the lumen of the trachea, permitted the return air to pass out in the space between the tube and the tracheal wall. The air, delivered under a pressure of twenty mm. Hg. by means of a pressure bottle, passed through a manometer ether bottle and a receptacle containing Ringer's solution. After the injection of atropine, the musculature was paralyzed by the administration of curare. When the thoracic wall was removed, it was seen that the lungs were immobile but that none of their other functions seemed to be disturbed. The organs retained their normal pink color, the blood pressure was unaltered, the cardiac function was preserved and the respiratory exchange was carried on efficiently till the effects of the paralyzant passed off.

The essential feature of the method was that a nearly continuous current of air was delivered just above the tracheal bifurcation by a flexible tube and returned by a different path. This also prevented indifferent or infectious matters from being aspirated into the trachea. It provided not only a means for the prevention of pneumothorax in intrathoracic procedures, but gave to the surgical world a new method for the successful administration of anaesthetics.

Many experiments were made with these various forms of apparatus and modifications of the different pressure machines,

were made by enthusiastic investigators from time to time. Commendable features were combined to form new types of apparatus, and the original forms were elaborated or simplified to suit the needs of the experimenter so that at the present time, one finds a great variety of instruments exemplifying the principles established by the pioneers in this work.

Davies had a machine constructed consisting of a tank on the plan of a gas meter, to which were connected cylinders containing compressed air and oxygen. The air passed through a Stott gas governor, through an Alcock chloroform box, a heating compartment and was then delivered to the patient, through an intubation tube. The used air returned through an exit tube to an expiratory chamber governed by a weight valve.

Elsberg, using the Meltzer method, sought to make the apparatus more practical by additions and modifications and his apparatus has been used successfully both in animal experimentation and in thoracic work in the human being. His machine was portable and run by electric energy. Ehrenfried, however, believing Elsberg's apparatus too cumbersome and expensive, had constructed a three-necked Wolff's bottle contained in a copper water jacket. In this machine the stream of air from a foot bellows is sent through the hot water over the ether in the bottle and through a mercury pressure regulator to an intubation tube. The machine is provided with a safety valve and is so arranged that drops of condensed ether cannot enter the lungs.

With the use of these various forms of pressure apparatus a large number of operations were done on experimental animals and on human beings, which showed not only the advantages and disadvantages of the machines used, but also brought out the various phenomena encountered in transthoracic procedures. Garre had demonstrated that no immediate serious consequences arose if the opening of the chest wall was not larger than the opening of the glottis. The lung collapsed partly, but some air passed through the lung and the mediastinum did not flap. Unless some form of pressure apparatus was used, a larger opening in the chest was followed by sudden collapse with cyanosis, dyspnoea, and rapid irregular pulse due to flapping of the mediastinum. Sauerbruch was of the opinion, however, that the untoward symptoms of dyspnoea and cyanosis, were due to the dis-

turbance in the ratio between the pressures in the pulmonary veins and arteries and the ratio between the intrabronchial and pleural pressures which set up a condition of hyperaemia in the collapsed lung by which the aeration was disturbed.

In the course of experimental work in lung resection with the application of both forms of differential pressure, based on the earlier work of Biondi, Glück and Schmied, it was shown that Tigel, Sauerbruch and Friedrich, who used the negative pressure machine, had a much lower mortality than did Mayer, Robinson and Green, in the same series when using the positive pressure apparatus. In seventeen complete extirpations, Mayer lost fifteen dogs. Robinson had 12 deaths in fifteen operations. Of thirty-eight animals, including Haecker's work, nine died of bronchus leakage; 7 died of infection. Of twenty-two dogs, the mortality was eighty-two per cent; the causes of death being:

1. Reflex stimulation of the vagus at the hilus.
2. Infection.
3. Tension pneumothorax.
4. Transudate.

It was at first thought that this difference in the mortality was due to the forms of apparatus used. Sauerbruch reasoned that with his method some negative pressure remained which was favorable to the compensating emphysema, but that the positive pressure caused over distension of the lungs with subsequent dilatation, dyspnoea, and post operative embolism. The increase in pressure, which was ten to fifteen mm. above the normal, led to compression of the lung alveoli with augmentation of the work of the heart. It has since been shown that the unsuccessful results were not due to the form of pressure used, but rather to the conditions that were induced at the time of the operation and which remained after the experimental work was completed.

It has been found that the cavity remaining after the removal of a portion or all of the lung must be filled in either by a transposition of the sound lung and mediastinum into the empty space, or by a falling in of the ribs or by the performance of a thoracoplasty in the human being. If the cavity is not obliterated, a transudate accumulates which in three or four days leads to a fatal issue by reason of the pressure which it exerts upon

the important structures within the chest or by sepsis from secondary infection of the effusion.

The obliteration of such a cavity therefore depends upon the power of the opposite lung to expand; upon the mobility of the mediastinal structures, or upon the performance of a more or less extensive resection of the chest wall. In those cases in which a compensatory emphysema and mobility of the mediastinum are relied upon to fill in the empty space it is necessary either during the operation or after the closure of the thoracic wound that the pressure within the chest must be reduced at least to the normal physiological amount. This is about minus seven mm. Hg. in man. This can be accomplished in several ways. It is possible at the end of the operation, to over-inflate the sound lung so that when the thorax is again made air tight, the elasticity of the lung so treated, will create sufficient negative pressure, when it collapses. The cavity has also been aspirated through a needle and tube till the required negative pressure, as measured on a manometer, has been reached. The compensatory filling of the empty thorax is not completed for several days at least. Respiration, however, is performed with very little alteration in the meantime. There is some increase in the heart rate, with a less marked increase in the rate and amplitude of respiration. The alveolar spaces become distended, but without atrophy of their partitions, the residuary air increases, there follows dilatation of the capillaries, thus lessening the work of the heart. This may go on to emphysema of a marked degree. Thus compensation is required not only of the lung structure, but also of the heart itself. The degree depending on the strength of the heart, the amount of lung excluded, and the time that has elapsed. In the human being it has been found that the mediastinum cannot be displaced to the extent possible in the dog, so that the obliteration of the cavity must therefore be accomplished in a great degree by the resection of ribs.

In addition to these desiderata there arose the question of the proper management of the bronchial stump which, if not securely ligated will leak air and produce tension pneumothorax which has invariably resulted in death. The best methods advocated were:

- (1) Inversion of the crushed stump as in appendectomy (Meyer);

(2) Single mass ligature about the bronchus and vessels with cauterization of the stump;

(3) Ligation of the bronchus as in two with sewing over of a lappet of lung tissue.

Tiegel has shown that the bronchial wounds heal best when the stitches are placed only in the peri bronchial tissues.

As is well known, the lung has adhesive properties much like the omentum and it is probably the best surgery after crushing and inverting, to sew over a portion of the lung for additional security.

Gundermann has proven that it is possible to unite two pleural free lung surfaces. The lung parenchyma is not damaged to any extent, there is no dead space between the lung surfaces and there is rapid healing by fibrinous membrane which may serve as a protective barrier. It is applicable in the removal of lung tumors, echinococcus cyst, etc.

Realizing that inflammatory processes often heal by reason of the reactive proliferation of connective tissue which leads to encapsulation, Bruns and Sauerbruch were able to stimulate the growth of fibrous tissue by ligation of the pulmonary artery.

The reasons for such an increase were not quite apparent to the investigators though it has been suggested that it may be due to the stagnation of the lymph and blood streams with retention of poisonous products or their antitoxins or merely to the disturbance of the circulation.

Previous to this time thrombosis and embolism of these vessels was induced for the same purpose by the injection of paraffin and Kuttner opened the thorax and ligated the artery *in situ*. His experiments had to do with the production of infarct and were complicated by the occurrence of pneumothorax and collapse of the lung.

Two conclusions were evident from these experiments:

(1) That ligation of the pulmonary artery without pneumothorax did not produce infarct, and

(2) That infarct only occurred when some secondary harm was added. (Orth, Fujinami, Zahn, Grawitz.)

Sauerbruch's ligation experiments showed that in three months' time the entire lung was surrounded by a mat of ad-

hesions several millimeters thick which bound the shrivelled lung to the chest wall and diaphragm and in many instances drew in the ribs to a marked degree. The lung was airless and much smaller than normal. A firm indurative process was present throughout and no plural exudate occurred. He has since performed the operation on human beings with the same results.

Because of the fact that patients with heart trouble showed a passive congestion which gave a lessened disposition to tuberculosis, Tiegel tried to produce a similar condition of the lung circulation by applying silver wire ligatures which healed in situ and produced a stenosis of the vessel. The lung showed congestion and enlargement during the first days and later after the hyperemia disappeared the organ became smaller, was firm, shrivelled, and pale. Microscopically, there was increase in connective tissue and thickening of the alveolar septa. Complete ligation of the pulmonary veins gave the same results. The practical application was carried out on rabbits who had received one-half mg. of a pure culture of tubercle bacilli in emulsion. There was retardation and prevention of infection in the ligated lungs. There was always a smaller number of foci which were smaller and more encapsulated and caseation was less marked. The untreated lungs invariably went on to rapid caseation.

The underlying principles and the results of this experimental work were followed immediately by their practical application in operations on human beings. Kümmel reported the removal of the entire lung for carcinoma without any marked disturbance of the pulse or respiration. W. Müller demonstrated a preparation of the upper right lobe of a three-year-old child. The lesion was a caseous pneumonia and the patient withstood the operation very well, but died three weeks after from a tuberculous basilar meningitis. Freidrich operated on right-sided tuberculosis with haemoptysis. The patient is now in good condition and is hemorrhage free. Körte removed the lower lobe and part of the middle lobe for cavity formation four years ago; except for a high grade scoliosis the boy is perfectly well.

By means of the Meltzer method, Elsberg has performed thoracotomy for lung tumor, abscess and gangrene. He has also attacked cancer of the lower portion of the oesophagus with ease

and safety. Palpatory exploration of heart, lungs and aorta have been made and in ten thoracotomies, there were no laryngeal, pulmonary, or bronchial complications. Many operators have demonstrated the safety of this method and as Meltzer has shown the reserve efficiency of the lung, during its use is greater than with any other method.

Ehrenfried, Lillenthal, Peck and Fisher have all used the method with good results, in operative work on human beings. Scudder has successfully operated a case of rupture of the diaphragm in which the left chest contained the entire stomach, a portion of the colon, and omentum.

Although lesions and surgical conditions of the lung have been attended by a high mortality, and have usually been treated conservatively, it must be assumed that better results will be obtained with the development of these various methods and their ever increasing use.

Wolf has succeeded in curing rupture of the lung under positive pressure narcosis, and has successfully treated two cases of gun shot wound. Seggel, who had previously had poor results with the conservative treatment of lung rupture, cured a case by exact coaptation and pneumopexy. Küttner, using the Sauerbruch chamber, successfully treated a gun shot wound of the lung. Baudet had very good results in five out of seven cases of lung rupture. Seydel has successfully removed pleural sarcoma.

Stuckey reported twenty-five cases of stab wounds of the chest with sixteen cures.

In contemplating the work that has been accomplished in this new field, we will not fail to note that besides the relief these measures have afforded to the sufferers from various disease entities, that the development along this line of work has opened up new paths, in the realm anaesthesia; has given new ways for the reinvestigation of the normal physiology of the heart and lungs and of their pathological lesions. No doubt, the conclusions so reached will have far-reaching influence on the solution of many problems having to do with nutrition and metabolism and with many of the questions having to do with the general bodily functions.

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Editorial

Without detaining the reader's attention longer on this painful theme, it is enough to say that the Lady Peveril did undertake the duties of a mother to the little orphan; and perhaps it was owing, in a great measure, to her judicious treatment of the infant that its feeble hold of life was preserved, since the glimmering spark might probably have been altogether smothered, had it, like the mayor's former children, undergone the over-care and over-nursing of a mother rendered nervously cautious and anxious by so many successive losses. The lady was the more ready to undertake this charge, that she herself had lost two infant children; and that she attributed the preservation of the third, now a fine healthy child of three years old, to Julian's being subjected to rather a different course of diet and treatment than was generally practised. She resolved to follow the same regimen with the little orphan which she had observed in the case of her own boy; and it was equally successful. By a more sparing use of medicine, by a bolder ad-

mission of fresh air, by a firm, yet cautious, attention to encourage rather than to supersede the exertions of nature, the puny infant, under the care of an excellent nurse, gradually improved in strength and in liveliness.

Peveril of the Peak.

SIR WALTER SCOTT.



The Albany Guild. The ANNALS has received the last Annual Report of the Albany Guild for the Care of the Sick for the year ending December 31, 1911.

It is a great satisfaction to record each year the successful administration of this most important charity, and, especially to record now that changes in the officers of the Guild have in no way detracted from its value. Mrs. W. W. Byington, who has been the guiding spirit of this organization for twenty-two years, resigned the presidency, and for the year 1911 the responsibilities were assumed by Mrs. Frank Cowdery, and at the end of the year she in turn was succeeded by Mrs. George P. Hilton. Some of the difficulties which have gradually accumulated during the development of the work of the Guild have been met, and it is now proper to say that all debts have been paid and the contributions for the year have been sufficient for its maintenance. The members of the Board of Managers have assumed willingly the laborious duties of the various committees, and work in the tuberculosis, social service, visiting nursing, obstetrics and dentistry departments and the demands of the sick poor generally have been met without any reservation.

The Guild cooperates with other charitable institutions and is in touch with the Commissioner of Charities, so that all poor people who require the services of a nurse and even need some necessaries of life, particularly under the hardship of sickness, have had proper care and attention. During the year, 1,945 new cases were visited, and the total number of visits reached the large total of 21,202. This is a revelation of practical charity for which not only the public but the physicians in Albany are placed in great debt to the Guild.

There is a feeling of satisfaction and comfort that this department of medical work is managed in such a way, and the Guild is always entitled to the sympathy and active support of our citizens.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, APRIL, 1912.

Deaths.

Consumption	21
Typhoid Fever	1
Scarlet Fever	0
Measles	0
Whooping-cough	3
Diphtheria and croup	1
Grippe	1
Diarrheal Diseases	2
Pneumonia	15
Broncho-pneumonia	15
Bright's Disease	14
Apoplexy	10
Cancer	14
Accidents and violence	8
Deaths over 70 years	40
Deaths under 1 year	32
Total deaths	199
Death rate	24.19
Death rate less non-residents	21.03

Deaths in Institutions.

	Resident.	Non-Resident.
Albany Hospital	14	9
Albany Orphan Asylum	0	0
Child's Hospital	1	0
Albany County Jail	0	0
County House	4	3
Home for the Friendless	0	0
Homeopathic Hospital	6	3
Hospital for Incurables	1	0
House of Good Shepherd	1	0
Little Sisters of the Poor	1	0
Public places	1	3
Penitentiary	0	0
St. Margaret's House	1	1
St. Peter's Hospital	5	2
Austin Maternity Hospital	2	0
Albany Hospital, Tuberculosis Pavilion	4	1
Labor Pavilion	1	1
Totals	42	23
Births		158
Still Births		3

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

In the Bureau of Plumbing, Drainage and Ventilation, there were two hundred thirty-eight inspections made of which eight-nine were of old houses and one hundred forty-nine of new houses. There were fifty-eight iron drains laid, forty-one connections to street sewers, forty-one tile drains, one urinal, fifty-seven cesspools, seventy-five wash basins, eighty-four sinks, sixty-seven bath tubs, sixty washtrays and one hundred twenty-one tank closets. There were three hundred thirty-six permits issued of which two hundred sixty-three were for plumbing and seventy-three were for building purposes. Fifty-seven plans were submitted, of which nine were for old buildings and forty-eight for new buildings. Forty-three houses were tested, ten with blue or red and there were thirty-three water tests. Twenty-four houses were examined on complaint and seventy-five were re-examined. Eleven complaints were found to be valid and thirteen without cause.

BUREAU OF CONTAGIOUS DISEASE.
Cases Reported.

Typhoid fever	5
Scarlet fever	1
Diphtheria and croup.....	32
Chickenpox	3
Measles	34
Whooping-cough	5
Consumption	38
 Total	 118

Contagious Disease in Relation to Public Schools.

	REPORTED.
	D. S. F.
Public School No. 1.....	1
Public School No. 4.....	2
Public School No. 17.....	2
Public School No. 20.....	7
High School	1
St. Ann's School.....	3
Number of days quarantine for diphtheria:	

Longest..... 21 Shortest..... 4 Average..... 12 1/17

Number of days quarantine for scarlet fever:

Longest..... 33 Shortest..... 19 Average..... 25 1/3

Fumigations:

Houses.....	54	Rooms.....	228
Cases of diphtheria reported.....			32
Cases of diphtheria in which antitoxin was used.....			31
Cases of diphtheria in which antitoxin was not used.....			1
Deaths after use of antitoxin.....			1

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	15
Negative	26
Failed	0
 Total	41
Living cases on record April 1, 1912	354
Cases reported during April:	
By card	31
Dead Cases by certificate	6
	—
	37
	—
	391
Dead cases previously reported	15
Dead cases not previously reported	6
Duplicates	0
Recovered	0
Removed	1
	—
	22
 Living cases on record May 1, 1912	369
Total tuberculosis death certificates filed during April	21
Out of town cases dying in Albany:	
Albany Hospital	1
Albany Hospital Camp	1
Labor Pavilion	1
	—
	3
 Net city tuberculosis deaths	18

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	39
Initial negative	185
Release positive	29
Release negative	85
Failed	37
 Total	375
Test of sputum for tuberculosis:	
Initial positive	17
Initial negative	34
Failed	5
 Total	56

BUREAU OF MARKETS.

Market reinspections	105
Public market inspections.....	26
Fish market inspections.....	2
Fish peddler inspections.....	1
Pork packing house inspections.....	1
Rendering establishment inspections.....	2
Slaughter house inspections.....	6
Hide house inspections.....	3

MISCELLANEOUS.

Mercantile certificates issued to children.....	25
Factory certificates issued to children.....	24
Children's birth records on file.....	49
Number of written complaints of nuisances.....	55
Privy vaults	5
Closets	4
Plumbing	14
Other miscellaneous complaints.....	32
Cases assigned to health physicians.....	76
Calls made	177

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR APRIL, 1912.—Number of new cases, 124; classified as follows: Dispensary patients receiving home care, 5; district cases reported by health physicians, 5; charity cases reported by other physicians, 29; moderate income patients, 73; metropolitan patients, 12; old cases still under treatment, 111; total number of cases under nursing care during month, 235. Classification of diseases for the new cases: Medical, 23; surgical, 10; obstetrical under professional care, mothers 40, infants 41; eye and ear, 2; throat and nose, 1; infectious diseases in the medical list, 7. Disposition: Removed to hospitals, 5; deaths, 12; discharged cured, 93; improved, 17; unimproved, 15; number of patients still remaining under care, 93.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 3; nurses in attendance, 3; patients carried over from last month, 1; new patients during month, 4; patients discharged, 5; visits by the attending obstetrician, 3; visits by students, 48; visits by nurses, 57; total number of visits for this department, 108.

Visits of Nurses (all departments).—Number of visits with nursing treatment, 1356; for professional supervision of convalescents, 440; total

number of visits, 1796; cases reported to the Guild by five health physicians, and forty other physicians; graduate nurses 9, and pupil nurses 6 on duty.

Dispensary Report.—Number of clinics held, 95; new patients, 69; old patients, 259; total number of patients treated during month, 328. Classification of clinics held: Surgical, 11; nose and throat, 9; eye and ear, 18; skin and genito-urinary, 9; medical, 13; lung, 12; nervous, 1; children, 13; gynecological, 9.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The following papers will be presented on June 1st and 3rd at the meeting of the above Society at Marlborough-Blenheim Hotel, Atlantic City, N. J.: "The Advisability of Newspapers and Magazines Having Medical Editors on their Staffs," Edgar A. Vander Veer, M. D., Albany, N. Y. "False Values in the Practice of Medicine," H. Edwin Lewis, M. D., New York. "Science in Personal Journalism," T. D. Crothers, M. D., Hartford. "Eugenics in the Medical Magazines," C. H. Hughes, M. D., St. Louis. "The Province of the Editor in Medical Journalism," W. B. Snow, M. D., New York. "Commercialism," C. F. Taylor, M. D., Philadelphia. "Research Work in Life Insurance Medicine," By Invitation, Fred'l L. Hoffmann, Newark. Statistician Prudential Ins. Co. "Shifting Medical Conditions Confronting Medical Journalism," By invitation, E. A. Ayers, M. D., Prof. Emeritus Obstetrics, New York Polyclinic. "Medical Journalism from a Disinterested Standpoint," Albert E. Sterns, M. D., Indianapolis. "What Doctors Read and Write," Erwin Reissman, M. D., New York. "Independent Medical Journalism and the Task of the Independent Editor of Today," W. J. Robinson, M. D., New York. "Differential Diagnosis between the "write-up" and an Honest Article on a New Remedy," By invitation, H. S. Baketel, M. D., New York. "The Medical Editor of a Daily Newspaper, his Duties and his Educational Opportunities," A. S. Burdick, M. D., Chicago. "Medical Expert Testimony," R. B. H. Gradwohl, M. D., St. Louis. "Book Reviews," Arnold Snow, M. D., New York. "State Board Examination Questions and Answers in Medical Journals," Hills Cole, M. D., New York. "Subscription Getting," G. Strobach, M. D., Cincinnati. "Laboratory Experiments versus Clinical Experience as a method in determining the therapeutic value of a remedy," John W. Wainwright, M. D., New York. "Anonymous vs. Personal Journalism," Chas. A. Wingerter, M. D., Wheeling, W. Va. Subject to be announced, W. A. Young, M. D., Toronto, Canada. "How the Medical Press can Cooperate with the Manufacturers for the Proper Introduction of New Materia Medica Science and Brands of the same to Commerce," By invitation, F. E. Stewart, Ph. G., M. D., Prof. of Materia Medica, School of Pharmacy, Medico-Chirurgical College, Philadelphia.

DENTAL INTERNE (MALE). GOVERNMENT HOSPITAL FOR THE INSANE. JUNE 5, 1912.—The United States Civil Service Commission announces an examination on June 5, 1912, at the places mentioned in the list printed

hereon, to secure eligibles from which to make certification to fill a vacancy in the position of dental interne (male), at \$600 per annum, with maintenance, in the Government Hospital for the Insane, Washington, D. C., and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill such vacancy by reinstatement, transfer, or promotion.

The Department states that it reserves the right to terminate the appointment at the expiration of one year of service if it is deemed advisable to do so.

The examination will consist of the subjects mentioned below, weighted as indicated:

<i>Subjects.</i>	<i>Weights.</i>
1. Letter writing (the subject matter on a topic relative to the practice of dentistry).....	5
2. Anatomy and physiology (general questions on these branches, also with special reference to the teeth, mouth, and head)	10
3. Chemistry, <i>materia medica</i> , and therapeutics (the preparation, properties, and reactions, of chemicals; crude drugs and their preparations, their action and application, with those of other therapeutic agencies).....	15
4. Dental pathology and oral surgery (the morbid processes incident to diseases and injuries of the teeth, mouth, and contingent structures, and their surgical treatment) 20	
5. Operative and prosthetic dentistry (the detailed technics of general and special operative and laboratory work) 25	
6. Bacteriology, histology, and hygiene (the cultivation, isolation, demonstration of bacteria, the principles of sterilization, mounting specimens, use of microscope, the principles of general and oral hygiene, etc.).....	10
7. Orthodontia (local and constitutional irregularities in growth and development of the teeth, and their correction)	15
<hr/>	
Total	100

Applications will not be accepted from persons who fail to indicate, in answer to Question 18 of the application form, that they are graduates of not more than 18 months' standing of regularly incorporated dental colleges.

Applicants must be unmarried.

Age limit, 20 years or over on the date of the examination.

This examination is open to all citizens of the United States who comply with the requirements.

This announcement contains all information which is communicated to applicants regarding the scope of the examination, the vacancy or vacancies to be filled, and the qualifications required.

Applicants should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the board of examiners at any place mentioned in the list printed hereon, for application and examination Form 1312. No application will be accepted unless properly executed and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

NEW YORK STATE CONFERENCE OF CHARITIES AND CORRECTION.—The thirteenth annual New York State Conference of Charities and Correction will be held at Syracuse, N. Y., November 19 to 21, 1912.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held at the County Court House on Tuesday evening May 14, 1912, at 8:30 p. m. The following papers were presented: "Report of a Case of Stills Disease," by Dr. Henry Kurth. "Pathology of Stills Disease," by Dr. E. Mac D. Stanton. "The Treatment of Chronic Gastro Intestinal Disorders in Childhood," by Dr. Frank Vander Bogart.

STATE TO STERILIZE HABITUAL CRIMINALS.—Governor Dix has given his signature to the Bush Bill, a measure introduced into the assembly by Dr. R. P. Bush of Horseheads, which provides for the sterilization of certain classes of male criminals and defectives confined in state institutions. The criminals coming under the provisions of this measure are those who have been convicted of rape or of such a succession of offenses as the board may decide to afford sufficient evidence of confirmed criminal tendencies to make it probable that they would transmit to offspring a tendency to crime, insanity or feeble-mindedness. The law creates a board to be known as the Board of Examiners of Feeble-Minded, Criminals, and Other Defectives and provides that this board is to be made up of one surgeon, one neurologist and one medical practitioner, each with ten years' experience.

CIVIL SERVICE EXAMINATIONS.—The United States Civil Service Commission announces an examination to be held on June 5, 1912 to secure eligibles from which to make certification to fill two or more vacancies in the position of medical interne, Government Hospital for the Insane, Washington, D. C., at \$600 per annum with maintenance. Promotion is regular for satisfactory service. Applicants must be over twenty years and unmarried. Women will be admitted to the examination, although at present there are no vacancies for women. Further particulars may be obtained from the United States Civil Service Commission, Washington, D. C.

INSANE ALIEN PROBLEM.—Governor Dix has appointed Dr. Spencer L. Dawes to investigate the insane aliens in the state. This is in response to the plea of the Lunacy Commission of the State of New York that the laws regarding the deportation of the criminal insane be investigated. As has been stated before, the alien insane in the institutions of the state number about seventy-five per cent of the total while the alien population is estimated at about twenty-five per cent. Under the present laws, which the Commission in Lunacy maintains are defective, if it can be proved, within three years of his entry, that an alien had insane tendencies before he entered this country, he can be deported. It is thought that Attorney General Wickersham's decision in the early part of the year will greatly limit the power of the board. This decision maintained that the board was acting in its judgments regarding certain forms of insanity on a medical opinion, and not on a fact, and it is feared that this will greatly nullify the power of the board. Dr. Dawes after making an investigation is to report and to suggest legislation to relieve the situation.

WORKING OF THE TUBERCULOSIS LAW.—The State Department of Health has appointed Dr. C. S. Prest (A. M. C. '98), of Waterford, a special representative to visit the various cities of the state and investigate the working of the tuberculosis law. He will not only ascertain the tuberculosis situation in each locality but what proportion of cases are being reported to the health authorities and whether other provisions of the tuberculosis law are being carried out and what organized efforts are being made to control the disease. He will also suggest methods by which the efficiency of the work being done may be increased.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—What is designated by the National Association for the Study and Prevention of Tuberculosis, in a statement issued April 25, 1912, as the most advanced legislation in the campaign against tuberculosis that has been enacted by any state in the United States, if not by any country in the world, is found in a bill just passed by the New Jersey legislature and signed by Governor Wilson.

The new law provides that tubercular persons who refuse to obey the regulations laid down by the State Board of Health concerning the prevention of their disease, and thus become a menace to the health of those with whom they associate, shall be compulsorily segregated by order of the courts, in institutions provided for this purpose. If such a person refuses to obey the rules and regulations of the institution in which he is placed, he may "be isolated or separated from other persons and restrained from leaving the institution." The law further provides that all counties in the state of New Jersey shall within six months from April 1, make provision in special institution for the care of all persons having tuberculosis in these counties. The state treasury will subsidize each county to the extent of three dollars a week except those who are able to pay for the cost of maintenance.

Commenting upon this legislation, the National Association for the Study and Prevention of Tuberculosis says that this is the most advanced legislation of its kind that has ever been enacted in this country by any state legislature. The only other state which provides for compulsory segregation of dangerous cases of tuberculosis, is Maryland. The only city in the United States which has adopted a special ordinance providing for compulsory removal of dangerous tubercular cases, is San Francisco. A few other cities such as New York, exercise this power under certain provision of their sanitary codes, but no other city has any special ordinance on the subject.

The National Association declares that a consumptive who exercises sufficient precautions in the disposal of his sputum need not be a menace to anyone. The Association goes further, however, in saying that when a consumptive refuses to adopt the proper precautions necessary to prevent the spread of the disease, he should be forcibly isolated and segregated in a special hospital provided for that purpose.

INDUSTRIAL DISEASES.—The first report of the New York Factory Investigating Commission will be sent to physicians upon application made to the New York Association for Labor Legislation. The report contains in its thousand pages and over two hundred illustrations much information of value to physicians now requiring the reporting by physicians of certain industrial diseases. Following the report of the Commission itself are several appendices containing among other matters, reports on investigations made of lead poisoning, child and home labor, bakeries (including physical examination of eight hundred bakers) and an industrial survey of a district.

AMERICAN MEDICAL ASSOCIATION.—The sixty-third annual session of the American Medical Association will be held at Atlantic City, N. J., June 3-7, 1912.

As usual, the meeting will be divided into sections and many papers of unusual interest will be presented.

On the day before the meeting many lectures will be presented on subjects of vital importance.

PERSONALS.—Dr. JOSEPH H. BLATNER (A. M. C. '72), has resigned as city physician of Albany.

—Dr. GEORGE G. LEMPE (A. M. C. '88), has been elected president of the Board of Trustees of the German Hospital Association.

—Dr. HENRY L. K. SHAW (A. M. C. '95), has been appointed pediatrician to the New York State Board of Health.

—Dr. FREDERIC C. CONWAY (A. M. C. '06), has been appointed city physician of Albany.

—Dr. LAVERNE A. BOUTON (A. M. C. '11), is engaged in practice at Fultonville, N. Y.

—Dr. MELVIN T. WOODHEAD (A. M. C. '11), has opened an office at Fort Plain, N. Y.

IN MEMORIAM

—Dr. CHARLES K. WINNE, Jr., has removed to 222 Lark street, Albany.
 —Dr. PAUL T. HARPER has removed to 361 State Street, Albany.

MARRIED—Dr. EDWARD G. WHIPPLE (A. M. C. '06), and Miss Delia K. Thompson, on Thursday evening, May 9th, at First Congregational church, Malone, N. Y.

DIED.—Dr. HENRY A. FRANCE (A. M. C. '64), of Far Rockaway, N. Y., a veteran of the Civil War and a former postmaster of Far Rockaway, died at his home on April 15, aged 79.

—Dr. CHARLES F. CLOWE (A. M. C. '88), a member of the American Medical Association, for two years a medical missionary in Portuguese West Africa, formerly city physician of Schenectady, N. Y., died at his home in that city, April 29 from cerebral tumor, aged 45.

—Dr. CHARLES W. NICHOLS (A. M. C. '89), a member of the American Medical Association, a veteran of the Civil War, for several years health officer of Fairfield, N. Y., and physician to Herkimer County, died at his home in Whitesboro, April 23, from cerebral hemorrhage, aged 62.

—Dr. GEORGE H. REYNOLDS (A. M. C. '91), formerly a member of the American Medical Association and a practitioner of Delhi, N. Y., died at his home in Niwot, Colo., March 21, from tuberculosis, aged 46.

In Memoriam**HENRY A. FRANCE, M. D.**

Dr. Henry Alexander France, of the Class of 1864 of the Albany Medical College, died at Far Rockaway, May 15, 1912, from disease of the liver, at the advanced age of 78 years.

After graduating from the Albany Medical College Dr. France began practice at Norway, N. Y., and five years later removed to Poland, N. Y., where he entered into partnership with his preceptor, Dr. S. R. Millington. Dr. Millington later retired and Dr. France remained at Poland until 1885. His wife then died, and Dr. France spent a year in California, and then again practiced in Far Rockaway. In 1902 Dr. France retired from practice, and was afterwards postmaster for three terms. He was a veteran of the Civil War.

CHARLES F. CLOWE, M. D.

The following appreciative sketch was published in the *Saturday Globe*: One of the most active and prominent physicians of Schenectady county passed from life April 30th, when death claimed Dr. Charles Francis Clowe at his home, 613 Union street. The doctor had been in failing health for some time, but his friends had hoped that he might overcome



CHARLES F. CLOWE, M. D.

Albany Medical Annals

June, 1912

By courtesy of Saturday Globe

his illness and be spared for several more years of useful work and meritorious life. Dr. Clowe was born in Glenville and acquired his preliminary education in the district schools. He then took the course at the old Union Classical Institute, Schenectady, and in 1888 graduated from the Albany Medical College. For about a year he practiced his profession in Gloversville and was then appointed a medical missionary by an undenominational mission board of Boston. He was assigned to Africa and, accompanied by Mrs. Clowe, went to a point in West Africa about two hundred miles from the Guinea coast. For two years he remained on this mission and had to relinquish it when he contracted the African fever. He returned to Schenectady with Mrs. Clowe and a year later suffered a relapse of the fever, but again recovered. The effects of the disease, however, were never overcome by him and contributed to his final illness.

Despite his somewhat shattered health Dr. Clowe was very active and a tireless worker. He was a deep student and ranked high in his profession. For the development of humanitarian and philanthropic work in this section he deserves special credit, as he was one of the originators and founders of the Day Camp and the Physicians' Hospital. At one time he was president of the latter institution and for several years had been on the staff of the Ellis Hospital. He had also taken a deep and active interest in the playground movement and was an ardent supporter of the Red Cross organization. During the administration of Mayor Duryee he was health officer of Schenectady, going out of office the first of this year with a splendid official record and many improvements to his credit. This was the only political office he ever held. The doctor was a member of the First Reformed Church and active in the church societies. He also belonged to several medical societies, including the Schenectady County Medical Society, of which he had been president; New York State Medical Society; American Medical Society, and the International Medical Society. He was a frequent and valued contributor to medical journals.

Dr. Clowe was genial and generous, a man who liked his fellow men, but he gave little time to social affairs and devoted his life to his profession, family and studies. The near surviving relatives are his wife, whose maiden name was Miss Mary Louise Marcellus; his mother, Mrs. Martha Clowe; two daughters, the Misses Marion Frances and Edith L. Clowe; three sons, G. Marcellus, Harold L. and Kenneth C. Clowe, all of Schenectady, and one brother, Rev. Clinton W. Clowe, of Woodstock, Ulster county.

CHARLES W. NICHOLS, M. D.

Dr. Charles W. Nichols, of the Class of 1889 of the Albany Medical College, died at Whitesboro, N. Y., April 23rd, 1912, after an illness of two years.

Dr. Nichols had had an active career. He was somewhat older than the other members of his class in college, probably because his prepara-

tion was delayed on account of his participation in the War of the Rebellion. At the age of fifteen, he enlisted at Little Falls, N. Y., in Company E, One Hundred and Fifty-second New York Volunteers, Second Brigade, Second Division, Second Corps, Army of the Potomac, and served under General Hancock. He participated in the battles of Cold Harbor, Petersburg and others. On September 3rd, 1864, he was honorably mustered out by a special order from President Lincoln on account of his extreme youth. Since his graduation from the Albany Medical College, Dr. Nichols has not responded to the various communications sent out from the College, and there is no record of his practice or his career since that time. He is thought to have begun his practice in Amsterdam and later to have removed to Whitesboro where he died.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Cyclopedia of American Medical Biography. By HOWARD A. KELLY, M. D., Professor of Gynecologic Surgery at Johns Hopkins University, Baltimore. Two octavo volumes averaging 525 pages each, with portraits. Philadelphia and London: W. B. Saunders Company, 1912. Per set: Cloth, \$10.00 net; Half Morocco, \$13.00 net.

The profession is indebted to Dr. Kelly for this large and comprehensive biographical work. These two well arranged and carefully printed volumes unfold an historical record of the greatest value. The plan is unique in that Dr. Kelly has chosen selections from the biographical sketches of physicians published under the impressions and feelings aroused at the time of death. There is consequently a personal touch which would be wanting in the cold synopses and catalogues of incidents and achievements usually recorded after the lapse of time. Personal peculiarities are thus demonstrated, and Dr. Kelly has acted wisely in not limiting his selections to men whose attainments were severely technical or scientific. There is, for instance, an interesting sketch of the doctor whose alias was "Captain Thunderbolt." We believe we have run across this eccentric character before, probably in the writings of Alice Morse Earle; at any rate the description given of the incidents of his life by Dr. Kelly is well worth reading: "A certain air of mystery and romance seems to have followed him during his life, and gained general belief after his death. Two years after Dr. Wilson's appearance in the Connecticut Valley, a certain highwayman, Michael Martin, popularly known as Lightfoot, was hung at Cambridgeport, Massachusetts, for highway robbery. While awaiting execution, Lightfoot made a confession, which found its way into print."

"In this, he described his career as a robber and desperado, and showed himself to have possessed unusual talent in this role. He had operated with great daring and no mean success in Scotland, England, and Canada, until he was finally brought to justice in this country.

"In this 'Confession,' Martin frequently mentions a companion and leader, whom he designates as 'Captain Thunderbolt.' Together they had pursued an eventful career in Great Britain, and later in America. He describes certain wounds received by Thunderbolt, among which was a cut from a saber thrust on the neck, and a shortened and wounded leg, from the effects of a musket ball. It is related that Thunderbolt once held up a stage coach on its way to London, and holding a pistol to a man's head, said, 'Give me your money, or I'll blow your brains out,' to which the man replied, 'Blow away, I'd as soon go to London without brains as without money.' Thunderbolt seems to have appreciated the joke or the man's nerve, for it is said he left him with a laugh. There is little doubt that the bold highwayman, 'Captain Thunderbolt,' and the Brattleboro doctor, John Wilson, were the same man. There are many facts corroborative of this supposition. Dr. Wilson led a secluded life, with few acquaintances and no intimates. His necessary errands to grocery and other stores seem to have furnished about the only opportunities for his neighbors to get acquainted with him. He is said to have become greatly excited, whenever Lightfoot's 'Confession' was mentioned, and once, when he saw a copy at a patient's house, he threw it into the fire. Summer and winter, he always wore a large muffler about his neck, and it was hinted, that during the delirium preceding his death those who were present, heard events described very similar to those mentioned in Lightfoot's Confession."

Another eccentric character was Dr. John Peter Mettauer whose portrait, including the inevitable colonial silk hat, shows a vigorous and interesting personality. It is written of him that he invariably wore a tall stovepipe hat which nothing would induce him to remove, and he wore it everywhere and on all occasions, even at meals and it is said, also when in bed. He never attended service in any church, which was attributed to his unwillingness to remove his head gear, but was more probably due to the fact that he would not take the time from his work. When called upon to testify in court, he always declined to remove it. He even left directions that he should be buried with it on, and that there should be placed in his coffin a number of instruments and the letters of his first wife.

Although Noah Webster, the lexicographer, was not a physician, his name is included because he was the first epidemiclogist this country produced, for in 1796 he published "A Collection of Papers on the Subject of Bilious Fevers Prevalent in the United States for a Few Years Past," and in 1799 a two volume work known to all students of epidemiology entitled "A Brief History of Epidemic and Pestilential Diseases," which is of unusual interest and on account of its records and observa-

tions of epidemic diseases in this country has an enduring value. He also wrote other critical essays on medical topics.

Albany is well represented in this biographical dictionary. Sketches are given of Drs. James H. Armsby, Lewis C. Beck, T. Romeyn Beck, Edward R. Hun, Alden March, Jacob S. Mosher, Charles H. Porter, Charles A. Robertson, John Swinburne, the elder Vander Poel and Sylvester D. Willard. Dr. Christopher C. Yates is also mentioned. He was probably licensed by the Supreme Court of the State, and lived for many years in Albany, where he created much excitement by exhuming for dissection a half-breed Indian. It is said that the public was incensed by this sacrilege, and Dr. Yates braved the storm almost at the risk of his life.

In addition to these practitioners of Albany, several of the Alumni of the Albany Medical College who have obtained fame are mentioned. Among these are: Dr. Horace Tracy Hanks of the Class of 1861, who became prominent in gynecology in New York when that specialty was in its infancy; Dr. Benjamin Franklin Sherman, that rugged pioneer of practice of the Northern Tier, who graduated in 1841 and continued in active practice in Ogdensburg until past four score years; Dr. Ely Van de Warker, whose work in gynecology in Syracuse placed him among the most prominent surgeons of his time; Dr. William C. Wey, of Elmira, who is still remembered for his benignity and culture.

A fact of rather peculiar local interest is in relation to the career of Dr. William Tully, the therapist of Yale College. It is not generally known that Dr. Tully practiced in Albany from 1825 until 1829. This adds some little glory to our local record, as the well known "Tully Powder" was first suggested by him. Dr. Thomas W. Blatchford obtained a great reputation as a man of science, and was particularly active in the city of Troy where he was connected with the Marshall Infirmary from its foundation, and projected the Department for Mental Diseases of that well known institution.

The selection of extracts of local interest is somewhat invidious perhaps, but the inclination to seek local records in a work of this kind is one of the weaknesses of man. Judging from the care with which the medical life of Albany has been presented, we may decide that the country at large has been equally well considered and that this cyclopedia is truly representative. There are apparently very few errors. The name of Dr. Jacob S. Mosher, whose biographical sketch of Dr. Charles A. Robertson is the basis of the article on the latter, is erroneously written "James S. Mosher." The work of Dr. Sylvester D. Willard in relation for the care of the insane in New York State is fully described, but perhaps it would have been as well to have added the note that the famous Willard Asylum for the Insane, which represented a departure from all existing ideas and a distinct advance in care and treatment, had its name from Dr. Willard, which is thus perpetuated.

The Care of the Insane and Hospital Management. By CHARLES WHITNEY PAGE, M. D., Assistant Physician, Hartford Retreat, Hartford, Conn., 1871 to 1872 and 1873 to 1888; Superintendent, Connecticut Hospital for the Insane, Middletown, 1898 to 1901; Superintendent, Danvers State Hospital, Danvers, Massachusetts, 1888 to 1898 and 1903 to 1910; Member of The American Medico-Psychological Association, The Boston Society of Psychiatry and Neurology, The New England Psychiatric Society, The Massachusetts Medical Society. Boston, W. M. Leonard, Publisher, 1912.

In this manual Dr. Page has summarized the results of his long experience in practical administrative work. No such book as this has yet been published. Dr. Kirkbride once wrote on hospital construction, which incidentally, and of necessity, referred to many of the problems of daily administration, and the questions which exhaust the attention and perplex the judgment of hospital superintendents are largely discussed in the annual reports of their institutions. All of this scattered knowledge has been condensed and epitomized in the volume prepared by Dr. Page. An insight is given, not only into the difficulty of management of hospitals for the insane but into the spirit of administration, and in this Dr. Page has taken a high attitude of sympathy for the patients and conscientious regard for fiscal problems. In a certain field of activity the book will be found useful and suggestive.

The Way with the Nerves. Letters to a Neurologist on Various Modern Nervous Ailments, Real and Fancied, with Replies thereto Telling of their Nature and Treatment. By JOSEPH COLLINS, Physician to the Neurological Institute of New York. G. P. Putnam's Sons, New York and London, The Knickerbocker Press, 1911.

Dr. Collins has reprinted from the *Medical Record* a series of letters in which patients with nervous complaints are supposed to have described their difficulties and the suggestions of the physician for the restoration of health and comfort have been added in the form of epistolary correspondence. Eighteen subjects are considered, and as a large part of these are the topics which so often attract the cupidity of the quack, if Dr. Collins' book reach the laity, many unscientific and harmful methods of treatment may be anticipated. An intelligible idea of the underlying principles of these affections is given in which incidentally the processes of thought of the author have been clearly revealed. It is unfortunate that into a book of so great classical pretension the word "massage" should be admitted as a verb.

International Clinics: A Quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, the Specialties and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, A. M., M. D. Vol. III. Twenty-first series, 1911. Price \$2.00. Philadelphia and London. J. B. Lippincott Company.

This volume contains much valuable information for the general practitioner. Among the many readable articles we would sight the following for special consideration: "Some uses for some old drugs" by Edward Willard Watson, M. D., of Philadelphia. The writer recalls attention to some of the uses of drugs which are being rapidly forgotten even though telling nothing new, he adds his voice of protest against the prevalent habit of ignoring the pharmacopoeia and trusting to diagnosis for success in a professional career. "The successful practice of Medicine" by Thomas F. Reilly, M. D., of New York City, is a continued article of considerable length purporting to be the advice of a successful practitioner to the embryonic physician about to graduate from medical school. It contains many suggestive texts for those seeking material for graduation addresses.

Another article along similar but more advanced lines is by H. B. Allyn, M. D., of Philadelphia, entitled "Economic Conditions Affecting Physicians," the writer deals with the problem under six headings:

1. Greater cost of living.
2. Cost of maintenance of Physicians.
3. The changed attitude of the Public toward Physicians.
4. State and municipal Control of Public Health.
5. Lodge Practice and Sick-Insurance Societies.
6. The Remedies.

"The Operative Treatment of Recent Fractures of Long Bones" by Thos. W. Huntington, M. D., of San Francisco, has the last word on the mechanical fixation of fractured bones. The writer favors the use of steel staples as the material of choice. The article is well illustrated.

H. D. C.

International Clinics: A Quarterly of illustrated Clinical lectures and especially prepared original articles on treatment, medicine, surgery, the specialties and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, M. D., Philadelphia and others as collaborators. Published by J. B. Lippincott Company, Philadelphia and London. Vol. IV, Twenty-first series, 1911. Price \$2.00.

This volume contains a larger proportion than usual of articles upon "other topics of interest to students and practitioners" rather than those of a strictly scientific character and it is well that such is the case as it

tends to broaden the mind and sympathies of the reader. In this class we would mention a very able article from the pen of Sir Dyce Duckworth, Bt., M. D., LL.D., London, entitled "Empiricism and Modern Medicine" in which he sums up by making a plea for Rational Empiricism, together with slowly progressive scientific medicine.

In the domain of Legal-Medicine, George K. Frink, M. D., has a lengthy article on "Legal Facts a Physician Should Know in Surgical Cases." To the reviewer it appeared that Dr. Frink is over-cautious and that the great detail that he suggests in safe-guarding his position would be burdensome in active hospital practice.

Under the heading "Economics of Medicine" appear two articles, one entitled "The Successful Practice of Medicine" by Thomas F. Reilly, M. D., is a continuation of an article in Vol. III. of this series and smacks strongly of a chapter from "The Physician Him-self," being exceedingly academic in its scope.

The second article "Checking Waste in Dispensary Work" by Porter R. Lee, is a most readable one, full of valuable suggestions for Dispensary Workers, whether they belong to the Medical Staff or to that ever increasing corps of helpers known as Social Service Workers.

H. D. C.

SURGICAL PATHOLOGY

Edited by George E. Beilby, M. D.

A Comparative Study of the Histology of the So-called Hypernephromata and the Embryology of the Nephridial and Renal Tissues.

L. B. WILSON. *Journal of Medical Research*, Vol. XXIV, No. 1, January, 1911.

This study is based upon forty eight kidney tumors, which we have have been accustomed to call hypernephromata. Thirty-four of the tumors were removed at operations in the Mayo Clinic, and fourteen were unreported cases gathered from outside sources. In pursuing this study, the author became more and more impressed by certain discrepancies between the facts observed, and the Grawitz' hypothesis of their origin from adrenal rests. This impression was further strengthened by a review of the literature, and in particular by an excellent article by Stoerk, which fully established in the mind of the author many of his previous doubts. In fact, this paper by Stoerk arrays in a convincing manner a mass of facts and arguments against Grawitz' hypothesis, while at the same time, adducing much evidence to show the tumors to be of renal origin. We must admit, however, that there remain other characteristics of the tumors which still appear incompatible with our conception of adenomata or carcinomata derived from kidney tubules. In an attempt to clear up these points, the author recently reviewed, both in the literature and in the tissues, certain phenomena of the embryological development of the nephridial and suprarenal tissues.

As suggesting the origin of these tumors from adrenal rests he cites the views of Grawitz.

1. *The seat of the tumor*—They are situated immediately beneath the kidney capsule, a point frequently invaded by suprarenal cells.

2. *The character of the cells*—They are absolutely different from the epithelium of the uriniferous tubules.

3. *The fat content of the cells*—Fat is normally absent from the renal epithelium but frequently present in the suprarenal.

4. *Encapsulation of the tumor*—The capsule is similar to that which is found around "suprarenal rests" within the kidney, but which are not changed into tumors.

5. *Relation of the tumor cells to the surrounding tissues*—The cells which are analogous to the suprarenal cortex are disposed in more or less regular cordons, while in the central region of the tumors there is evidence of fibrous tissue resembling the medulla of the suprarens.

This hypothesis of Grawitz was accepted and confirmatory evidence supplied by a host of observers during the next quarter of a century. About the only critic of note during this period was Sudeck who held that the Grawitzian tumors had nothing to do with adrenal rests, but were renal adenomata. He described their development from an atypical proliferation of the epithelium of the kidney tubules and noted that the tumor consists largely of cells which are not separated from the wall of their supporting capillaries by connective tissue. Sudeck's views received little support, though from time to time observations were recorded which tended to throw doubt on Grawitz' hypothesis. One of these was that of Greer and Wells, who in a careful chemical examination of hypernephromata, failed to find any trace of adrenalin. Adami, in discussing broadly the classification of tumors on an embryogenetic basis, states the opinion that the two organs (adrenal and kidney) are embryogenetically so closely related that *tumors arising from homologous tissue must possess closely related characters*. For all this order of tumors, the transitional adenomas, carcinomas of adrenal, kidney, ovary and testis, he suggests the term *mesothelioma*.

Stoerk, who bases his statements on "many years of study of more than 120 specimens of renal tumors from operations and autopsies" begins his paper with a statement of his support and extension of Sudeck's views. He pertinently asks: "Why do Grawitzian tumors always develop from the kidney and never from the adrenal? Why do tumors developing on the adrenal gland always look so different from Grawitzian tumors. Why, in the face of the legion of adrenal rests found in the liver, is there not a single case of hypernephroma of the liver established?"

Stoerk's summary is as follows:

1. Between hypernephrogenic and nephrogenic tumors no kind of convincing agreement exists.

2. The different forms of Grawitzian tumors are shown histologically as varieties of one and the same fundamental type.

3. The Grawitzian tumors of the kidney are of renal origin.

4. The tumors under discussion should be designated adenomata, papillary cystomata or carcinomata of the kidney after the Grawitz type.

The personal observations of the author, both from an anatomical and histological standpoint, fully confirm the first two of Stoerk's conclusions. With regard however, to his third conclusion, that these tumors of the kidney are derived from convoluted tubules, he states that he is not prepared to agree.

In a long discussion of the various phases of this question, the author presents many more or less valid objections to both Grawitz' and Stoerk's hypothesis of the origin of these tumors and then asks the question, "Are they of Wolffian origin?" The very frequent inclusion of remains of the Wolffian body within or under the kidney capsule might lead one to expect the much more frequent development of tumors from this source than from the suprarenal.

The following general conclusions are drawn from this study:—

1. Most, if not all, so called "adrenal rests" are probably of Wolffian origin.

2. There is almost no evidence, embryological or histological, in support of Grawitz' hypothesis that the so-called hypernephromata have their origin in adrenal rests.

3. There is much evidence that the so-called hypernephromata do arise (according to Stoerk's hypothesis) from proliferations of the adult secreting epithelium of the convoluted tubules.

4. There is much evidence that the so-called hypernephromata do arise from islands of nephrogenic tissue (primitive renal blastema). Such tissue is sometimes present in the adult kidney and appears capable of forming tumors of non-infiltrating mixed—cordon, tubular, papilliform, and sarcoma type characteristic of the so-called hypernephromata.

*Tumors of the Male Breast. From the Laboratory of Surgical Pathology,
University of Pennsylvania.*

JOHN SPEESE. *Annals of Surgery*, Vol. 55, No. 4, Page 530.

The infrequency of tumors of the male breast is explained by its rudimentary state, the physiologic inactivity of its glandular elements, and particularly by the fact that the conditions incident to pregnancy, which predispose to mammary disease in the female, are entirely absent.

The author notes that the degree of frequency is well demonstrated in Williams' analysis of 13,894 primary neoplasms which show that 2422 originated in the breast; of these, 25 occurred in males, and 2397 in females. Therefore, 17.5% of all neoplasms occur in the breast, and when subdivided, we find that the female breast is relatively affected in

26% and the relative frequency in the male breast is 5%. Of the 25 tumors of the male breast collected by Williams, 16 were carcinomata, 3 sarcomata, and 6 various forms of benign growths. Statistics of other authors record about the same relative percentage of tumors in the male breast. They all tend to show that carcinoma of the breast occurs considerably later in life in men than it does in women. In the latter, the statistics of various authors vary from 45 to 49 years, and in males the average age is about 55 years.

The disease, however, may occur at an early age as in the cases reported by Blodgett and Coley, where the ages were respectively 12 and 20 years. Traumatism in a certain number of cases seems to be a predisposing factor in the development of cancer. From the author's records it would seem that it was particularly an etiological factor in cancer of the male breast. The effect of constant pressure is noted in the appearance of cancer in workmen, who, in their occupations, are accustomed to exert force in the breast region. These cases are so numerous that the etiologic importance of this factor cannot be overlooked. Some authors have found that the right breast is affected more frequently than the opposite one, whereas, other statistics place the degree of frequency slightly higher in the left. The average of a large series of cases, however, shows that the difference is so little that it is not of practical importance.

The clinical picture of the disease does not differ in many other particulars from that of the female. The growth is usually situated near and below the nipple, is small, hard and freely movable in the early stages. The primary tumor is frequently small and may be overlooked and there is a marked tendency to early metastases. Histories of the author's cases would tend to show that even earlier than in the female breast.

The histologic examination of the cases shows that the carcinoma arises most commonly from the ducts of the gland and less frequently from the acini, as is to be expected from their lack of development.

A peculiarity of the histologic examination is noted in the number of melanotic and squamous carcinomas contained in the author's cases and those which he has collected from literature. Of the scirrhouss growths, two were melanomas; and one of the three squamous carcinomata was a melanotic tumor. This frequency is explained by the fact that skin growths, in general, are much more liable to affect the male sex. The melanotic tumors also arise much more frequently in connection with structures of integumentary origin. The male breast being of this type and having lost most of its special characters is in a process of reversion to the primordial cutaneous condition, and herein may be an explanation of its comparative proneness to melanosis.

It is impossible to judge accurately concerning the percentage of cures because this fact is mentioned in a comparatively small number of cases. One author was able to find but six cases in the literature in which it was

stated definitely that recurrence had not arisen. Two of the cases in his series lived 21 and 11 years; Blodgett's case 5 years, and the second case reported by the author has lived 3 years without further trouble.

SARCOMA.

Sarcoma of the female breast occurs in but one to two per cent of the cases, and as an affection of the male gland must be regarded as a very rare condition. In 1906, Finsterer found 12 sarcomas of the male breast in the literature, three of these he reported for the first time. Connell a year later reported a case occurring in a male aged 25 and thoroughly reviewed the subject, collecting, in all, 34 cases.

BENIGN TUMORS.

The most common form, the author states, is fibro-adenoma which he divides unto two groups:

(1) Sharply circumscribed form, dense tumors which arise without traumatism in the breasts of young men and run a painful clinical course. Microscopically, there is little or no evidence of inflammation, but all the characteristics of the fibro-epithelial tumors which occur in the breasts of young females, to which they are analogous.

(2) Diffuse or ill-defined growths which may occur at any age as the result of traumatism. Microscopically, these enlargements have the same structure as those of the first group. Signs of inflammation are more in evidence, however, so that their differentiation from chronic inflammation may not be easy. They are called fibro-adenoma because of their progressive growth and microscopic structure. This formation corresponds to the "traumatic indurations" of some writers.

Practically the only other type of benign tumor of the breast is cystadenomata. The line of demarcation between the cyst and fibro-adenomata is not sharp in all cases, indeed as the author states, it is contended by some that there are transition stages of one to the other. From the pathologic standpoint, however, it is of importance to make this distinction because the cystadenomata are more likely to carcinomatous degeneration, and from the clinical point of view they differ from the fibro-adenomata when cyst formation is prominent.

In conclusion, the author finds, first that carcinoma is the most frequent tumor of the male breast.

Second, that the disease is seen later in life, grows slower, ulceration is more common, and traumatism plays a more important role than in women.

Third, that the operative mortality is nil; but the percentage of cures is probably much lower than in the female.

Fourth, that benign tumors are subject to the same malignant degenerations, as are similar tumors in the female.

Fifth, that adenofibroma is the most frequent type of benign tumor encountered, although all varieties have been met with.

Sixth, that adenofibroma in young men may be produced by the affection termed "adolescent mastitis."

Pneumococcus Peritonitis, with Report of a Case.

HARVEY B. STONE. *The Bulletin of the Johns Hopkins Hospital, Vol. 22,*
page 219, July, 1911.

The author believes that this condition presents a fairly well defined symptom-complex which should be better known and more generally recognized than is the case at present. Although not one of the exceedingly rare diseases, it is still sufficiently unknown to deserve reporting. These are the reasons which led the author to the presentation of this paper which he has re-inforced by certain features of a case of unusual interest which came under his observation. Briefly, the facts of his case are as follows: the patient was a female five years of age who had had pneumonia two years previous complicated by acute otitis media. After recovering from the pneumonia, the otitis persisted and became chronic. The onset of the peritonitis was sudden and very typical of acute peritoneal inflammation. At the operation there was a large amount of thick greenish yellow pus, particularly in the peritoneal cavity. It was noted that the pus was odorless. No lesions accountable for the infection could be found. Cultures were made and the pneumococcus isolated. For a short time after the operation the patient seemed to rally but the evening of the day of the operation her temperature rose steadily and she became delirious and died the next day with all the symptoms of a profound intoxication.

The author discusses the condition from various standpoints and he summarizes his article as follows: Pneumococcus peritonitis occurs more often in children than in adults and more often in female than in male children. There are two forms—the encapsulated, which exhibits a first period of invasion, a second period of localized abscess formation and a third of spontaneous rupture of the abscess; and the diffuse form of general peritonitis, rapidly fatal unless operated upon. The symptoms of onset in both forms, varying only in intensity, are abdominal pain, vomiting, fever and diarrhea. Rigidity is not characteristic. The treatment is surgical intervention as soon as possible. The prognosis of the diffuse form is very bad; of the localized form fairly good. The pus is characteristic and often sufficient for diagnosis from its macroscopic appearance alone.

ALBANY MEDICAL ANNALS

Original Communications

ARSENIC AND DIGITALIS IN PULMONARY TUBER- CULOSIS.

*Read before the Medical Society of the State of New York, April 17,
1912.*

BY A. JACOBI, M. D., LL.D.

In old literature some one may have met with the same subject and the same title. It is not my fault, but that of your Chairman, who insisted upon my entertaining you again upon that topic. He suggested that some fellow, though a regular frequenter of our meetings, might have forgotten that in 1884 he was present when I spoke on the same subject under the same heading. He said, it would bear repetition, anyway, because, for instance, neither the spontaneous tendency on the part of tuberculosis to exhibit an occasional recovery, nor the thousand and one remedies, and suggestions, and sanatoria, had succeeded in exterminating tuberculosis; and that it would be worth while, after all, to listen to what nearly thirty years after my communication of a rather mature experience I might have to say on one of the drugs which quite often yield favorable results. Particularly was he emphatic on what appears to be a fact that some people, we doctors amongst them, are given to expect a single drug or method of healing, medicinal or physical—as if, indeed, there were a contradiction between the two—to be successful. He was so earnest in his complaints of our failures to deal with and cure tuberculosis; of the unsatisfactory condition of our indications and our results; of the limitations of our horizon which gives us only partial and narrow views; of our satisfaction when we boast of our accomplishments after repeat-

ing the uniform talk about air when the patient has a pittance of a hundred cubic feet per head; of rest, when the poor fellow must work unless he means to starve himself and his children, and of simple and nourishing food which he does not even know by sight; of Colorado when he has no nickel to cross the ferry; of sanatoria and hospitals, overcrowded or inaccessible, that give him beside the memory of his starving family in the tenement, no comfort nor health; of public institutions that are chartered for the purpose of indeed furnishing unattainable air and rest and food, but no medication for sleeplessness, or cough, or excessive temperature. So he thought it was my duty to suggest at least one or two means to relieve the dearth of measures against some of the ways in which tuberculosis kills off our population.

If what I have to say is a rehash or a repetition, I might be consoled by the fact that the eternal repetition of fairly successful medication is preferable to the eternal repetition of the destructive working of tuberculosis.

If there be any medicine which, besides quinine and mercury, has been called a specific in many diseases, it is arsenic. It is known to act as a poison, and a strong caustic. It prevents putrefaction, though as a real antiseptic it ranks even below salicylic acid. It acts very favorably in malaria, chronic skin diseases, and maladies of the nervous system, and has considerable and sometimes unexpected effects in the treatment of lymphoma, even lymphosarcoma. In small and frequent doses it improves connective-tissue growth, it thickens the connective tissue of the stomach, and increases periosteal and osteal deposits. In the latter respect it is surpassed only by phosphorus, on the curative effects of which in subacute and chronic bone diseases I read a brief paper before you a number of years ago. Arsenic is also said to improve the sexual desire and power, and the physical courage of animals. Thus there is a variety of effects, the uniform cause of which remains to be explained. It can be traced back only, it appears, to the action of the drug on the cell. It is true that the different organs mentioned have cells of different structure, appearance, and function. But in regard to their nutritive processes the different varieties do not differ at all. [At all events oxygen acts on all of them in the same

manner, albumen is absorbed by them all, and osmosis regulates their circulation equally.]

The increase of cell growth in all the tissues mentioned points to the mode in which arsenic is effective. It cannot accomplish what it is known to do without local stimulation and irritation, which when moderate improve growth, when exaggerated (by large doses or in predisposed persons) lead to granular degeneration.

Its action as long as it is restrained within certain limits, has been utilized by Hans Buchner for practical and theoretical purposes. The former consists in its administration for phthisis, the latter in the attempt to fortify the bacillus theory. In his belief phthisis can be prevented by arsenic keeping out the bacillus. This is done by stimulating and gently overnourishing the cells, and thereby increasing the power by which the organism resists the invasion of the bacillus enemy. His theory is, however, more doubtful than his results. He relies on arsenic as his main medicinal resort in phthisis, and finds fault with Isnard only because this author used, in 1867, arsenic for curative only, and not for preventive purposes. In this remark lies the explanation of the effect which I claim myself.

If preventives be thorough, phthisis will remain dormant. That effect is accomplished by rational dietetics, climatherapy, and finally by arsenic. I know it has been used formerly in that diseased condition called consumption, but the reports of new experience do no harm. Contradictory reports prove nothing, for where two do the same thing, it is not always the same thing after all, and the method of administration of a drug is more important than the mere drug. Under the permanent use of arsenic the infiltrations diminish, elastic fibres disappear from the expectorations, the strength improves, and the body weight increases.

Of this result I have convinced myself in a great many cases while they were in the incipient stages.

Hans Buchner asserts that the incipient stage is not the only period in which arsenic proves effective. That is true. It has the same, or rather a similar, beneficial effect in the later stages. But he claims that complete recovery has been accomplished in the most severe cases, that perspiration and fever will cease,

the pulse becomes less frequent and stronger, and the vital capacity increases even in far-advanced cases. This I believe to be rather overdrawn. Particularly in regard to the hectic fever I have almost always been disappointed. I believe that even digestion was not at all improved by arsenic in *that stage*. Thus it has become my rule not to prescribe arsenic at all while the fever is very high, but to return to it as soon as the temperature has a tendency to become more normal. When I acted on that plan I had very often the satisfaction of improving the condition of very doubtful and far-advanced cases.

The doses ought not to be large. Nausea, colic, diarrhoea, oedema of the eyelids, are temporary contra-indications to the continuation of its use. One-fifteenth, or one-tenth to one-sixth of a grain of arsenous acid, daily, is a sufficient dose for an adult if it is to be continued for a long time. In order to render it less liable to give rise to disagreeable symptoms, a little opium may be administered with it. In most cases of incipient phthisis this combination is pleasant and useful. In such as show diarrhoea at an early period, its joint administration is particularly a happy one. Still, it may be remembered that gastric symptoms, attending the use of arsenic when first administered will be apt to disappear soon. It may also be remembered that with us tuberculous diarrhoea is less frequent than is seems to be in Europe.

The preparations I use are either arsenous acid, or Fowler's or Pearson's solution. It is best to give the former as a pill, in such combinations as I shall allude to shortly. Fowler's solution, three drops, or Pearson's solution, six to ten drops, three times a day, in a few ounces of water, administered after meals and gradually increased, will act favorably. In but few cases the former had to be exchanged for the latter, because of the intolerance of the stomach. That it enhances growth, every physician and every veterinarian know perfectly well. The favorable effect of arsenic is mainly noticed in incipient but well-marked cases. But in later cases also, I cannot say that I found a contraindication to arsenic in advanced cases unless the fever was too high and the digestion badly impaired. Such conditions may advise against arsenic, but temporarily only. But as a rule, the very indication for arsenic is rarely wanting in

pulmonary tuberculosis, for the lung is not engaged in a *uniform* and persistent destruction of its tissue. Alongside the formation of abscesses, with their staphylococcal fever, there is cell irritation going on and the necessity of utilizing it for the purpose of increasing its resistance. You will remember that when tuberculin was extensively used in 1891, it was believed that its effect would consist in the rapid proliferation of cell membrane and interstitial tissue which was expected to fortify the general tissue and to encapsulate the bacillus. Tuberculin did not do it, but *arsenic does*. But as you want its action to be persistent, give small doses, continually. [The organic preparations of arsenic do not exhibit their effect in the same way as the inorganic. The organic radicle is destroyed in the organism, and the inorganic elements freed. Atoxyl and Ehrlich's 606 are not of this simple composition; their indications lie in different directions. At all events, my experience or knowledge is not sufficient to consider these latter in this practical discussion of tuberculosis. The organic compounds I have just referred to, affect the protozoa directly and leave the tissue inviolate. It may happen, however, that the destruction of the protozoa is not complete, mainly when the doses were small; in that case disease—such as chronic malaria and syphilis—may relapse. On the other hand, arsenic in organic combination may have a cumulative action, such as peripheral neuritis, enteritis, even blindness, which has been noticed even after the administration of atoxyl. But while I have given arsenic in thousands of cases of nervous and infectious diseases, I have observed no sequelae except oedema, enteritis, dermatitis, or moderate neuritis.]

The effects—either morphologic or functional—of arsenic are not very distinct in the beginning of its administration, but it surely may have a cumulative action; for the cell substance being slowly poisoned, its life becomes extinct; it degenerates. The influence of arsenic is probably chemical. Bertrand found arsenic as part of every living cell; even in the yolk of eggs (some also in the white), to the amount of 1-200th of a milligram. It surely has a great effect on growth in general; adipose tissue, muscle, bone, periosteum, and connective tissue will increase; blood and haemoglobin are probably affected in the same way. Nitrogen is retained in larger quantity, albumin increases in the whole

organism. But from what we know of the local effects of chronic arsenical poisoning, we have to conclude that it works for good or bad principally in the active cells of the liver, the kidneys, the capillaries, and the blood. Exactly as in the case of phosphorus, it is by either small or too big doses, when administered a long time, that either normal growth or morbid degeneration is caused by arsenic. That is why it may be made equally efficient when either feebly developed organs are to be strengthened and enlarged, or pathological new formations and parasites are to be destroyed. Thus, general debility, malaria, lymphoma, sarcoma, leukaemia, syphilis, pseudo-leukaemia, malaria, and other parasitic diseases—such as sleeping sickness, relapsing fever, pellagra—have been found to furnish their different indications for the use of arsenic in proper combinations. It has no therapeutic effect unless combined with oxygen (contrary to what we know of phosphorus, which has its effect in the bone as a free uncombined element only), or as an arsenite of potassium or arsenite of sodium, or as arsenous acid, properly called arsenic trioxide. As a rule, it may be given for a long time without bad effects. To prevent its effect on the gastric glandules—which have been known to become atrophic during its use—some hydrochloric acid should be given regularly; or black pepper should be given with arsenic on account of its acid producing action, in the shape of Asiatic pills.

Many of my cases took at the same time arsenic and digitalis in some form or other. On them, I have reported to the Medical Society of the State of New York in 1884. Is that combination advisable, more than a single drug? It is pleasant to the observer, who bears no risk, to give a single drug only or to follow a single method only, but the sick person is more interested in his welfare and safety than in the doctor's comfort and actual or alleged scientific interest. In our relation to the sick we are physicians, not naturalists.

The latest writer on arsenic, and incidently guaiacol in connection with the subject of tuberculosis is Robert Brunow, an assistant in the Pharmacological Institute of the University of Innsbruck. He has experimented on animals in order to ascertain whether there is a specific effect of this drug, or whether it merely changes the physiological action of the organs of the

animal. His drugs were a combination of a three per cent. solution of potassium and sodium guaiacolate ana 1.5, potassium arsenite 1 centigram, which is the equivalent of Fowler's solution, one gram. His results were an increase of weight of the animals when he fed arsenic, of appetite and diuresis when he gave them guaiacol. Colonies of tubercle bacilli would grow on glycerin-agar, though it contained guaiacol and arsenic. Three rabbits were infected with tuberculosis through ear injections. One had been given the guaiacol-arsenic preparation some weeks before the injection, and the drug was continued twelve weeks. The rabbit did not lose weight, but increased 100 gram toward the end of that time. The second was treated in the same way, received the drug after the injection, became first emaciated, but recovered its original weight about the tenth week. Both were killed after the twelfth week and exhibited nothing but a few tubercular nodules, mainly at the point of injection. The third rabbit received no drug, and died in seven weeks of pulmonary tuberculosis. Result: *the animals withstood tuberculosis when fed on guaiacol and arsenic.*

Three guinea pigs were infected through the peritoneum. One was given the guaiacol-arsenic preparation before, one after infection, the third not at all. This one died after three weeks of peritoneal tuberculosis, the others were killed and exhibited a very moderate infection. Three other guinea pigs were infected subcutaneously. One was treated with drugs two weeks before. Its weight decreased, but became normal after eight weeks. The second was treated some little time after infection. Both were killed, and exhibited a tubercular infiltration at the locality of injection. It was mixed with connective tissue. The third was not treated and died after some weeks of generalized tuberculosis.

His general conclusions, based upon his experiments, are, in regard to arsenic, that it has a specific anti-tuberculous action. Guajacol has no such effect, but it increases the appetite diuresis and the elimination of nitrogen. Through its effect on toxalbumins, it relieves fever and perspiration. This latter is a property which has been ascertained during these, more than twenty, years.

The favorable results attained by Burow are contradicted by L. Nürnberg in the same journal, the Münchener Medicinische Wochenschrift. Perhaps this is due to modern haste of literary production, when you consider that Burow published his paper in No. 34, on page 1792, Nürnberg in No. 50, on page 1912—all within three months. Nürnberg says that in the test tube his tubercle germs were not killed by arsenic, and for that reason he resorted to animal experimentation. He says he produced tuberculosis of the iris and of the peritoneum, and used arsenic before and alongside the treatment, or without any. In his autopsies he found tuberculosis in the liver, spleen, and ascites. That is why he concludes that fair doses of guajacol and potassium arsenite do not hinder the growth of tuberculosis in glycerin agar, when either used by itself or in combination. The same experience was attained in the living animal. Nürnberg refers to previous observations of other authors; while Hans Buchner recommended it very warmly, Stintzing and Leyden denied any specific effect. The same was found in regard to guajacol and creosote, which were credited, however, with general improvement as to appetite, cough, and sputum. After all, in the first number (Jan'y 2) of 1912, Burow defends his former position against the assertions of Dr. Nürnberg by stating: first, that his investigations were made in the Hygiene Institute of the University of Innspruck together with and under the control of its Director, Professor Ballner; second, the cultures were those of bacillus of the human type and did not come from cavities from which, as a rule, only mixed infections can be obtained; third the observations were many and of long duration, the animal experiments very numerous and always direct—not intermediate, that means after a passage through other animals. The animals treated with guajacol arsenite remained alive. They were killed for the purposes of the autopsy only. There was no difference between the autopsy results, whether the treatment began before or after the infection with tuberculosis.

It appears legitimate for Dr. Burow to ask why, in spite of all his doubts, Dr. Nürnberg, hopes after all for the discovery of a synthetic arsenic preparation. What I am quite sure of is that I have used arsenic in my treatment of the tuberculous these

more than fifty years, and that I have tried to observe correctly and in many thousand cases. I am sure I have had success, else I should not stand here. During the last half century, I have also noticed reports of experiments which failed, others which were contradictory, or negative. That was so in ante-bacteric times; it is so now. What you or I experience in thousands of instances should not go for naught, though nobody is infallible—neither our teachers nor our pupils, nor ourselves. I do know that my patients do well during the protracted administration of arsenic. If you are careful, you may be satisfied with not seeing your patient oftener than every five or twenty-five weeks. So your treatment is surely not harmful.

What is the rôle of digitalis in the treatment of pulmonary tuberculosis? Here it exerts its influence, as in other conditions. It contracts the heart and the arteries, increases blood pressure, nourishes the tissues—including the heart itself;—it should be avoided in its acute inflammations only or in those myocardial changes which bear no strain. That is why the doses should be adapted to the indications. I have to refer you back to what has been written for you in your Transactions of 1884, and again in a paper on "Prolonged Medication, with Special Reference to Digitalis," in the New York Medical Journal of 1902. You know, however, all about the cumulative effects of digitalis. They are avoidable. Be sure not to use preparations which are not immediately soluble in water. If you do, the drug may not be absorbed at once, but in a larger bulk than you premeditated, and be sure to stop large doses, when given in acute dilatations of the heart and cyanosis and acute pulmonary oedema after you have accomplished your end. This peculiar indication of giving small doses a long time in succession I have discussed in my lectures twenty-four years before I had an opportunity to appear before you, in 1884. That it was not generally adopted or appreciated, is not your fault, nor mine. In Germany, it was suggested as late as 1899 (17th Congress for Internal Medicine), frowned down for several years, and finally appreciated. That such drugs as mercury, iodine, phosphorus, thyroid, thymus, supra-renal gland, indicate and require *prolonged* administration, is established and accepted. Thus, digitalis also may be given in appropriate doses—to an adult, three or five grains daily—

for months or even years in chronic heart diseases, with nothing but beneficent effect. That is easily understood by who-soever acknowledges that it is worth while to be patient and persistent when the disease is obdurate. Doses of digitalis may thus be found efficient in chronic anaemia, and chlorosis, when the circulation requires stimulation, for its tonic effect, in connection with arsenic or iron, or nux. In pills, such medication is easily, and readily taken and digested.

Conclusions:

It is a grave mistake to believe that a patient with tuberculosis should be directed to rely on air, rest and food, to the exclusion of drugs.

Physical measures do not cure patients with restricted means, or those really poor, and anxious, and sorrowful.

Sanatoria which pride themselves on refusing medicinal aids, are unsuccessful.

So-called symptomatic drugs, camphor, opiates, etc., are helpful and indispensable.

Arsenic should be given for months and years. I never treat a chronic pulmonary tuberculosis without it. I seldom give it without a small dose of digitalis. I never give it without a guajacol salt: my routine has been the carbonate. Many prefer styracol, or thiocol.

THE DIAGNOSIS OF DISEASES OF THE URINARY TRACT BY THE COMBINED USE OF THE CYSTOSCOPE AND THE X-RAY.

Read before the Surgeons' Club of Schenectady, March 19th, 1912.

By E. M. STANTON, M. D.,

Schenectady, N. Y.

In no other special field of surgery has there been more substantial progress in recent years than in the surgery of the urinary tract. This progress has been dependent upon the development of accurate methods of diagnosis, chiefly through the aid of the cystoscope, the ureteral catheter and the X-ray.

In hospitals where these diagnostic methods are used routinely

in suspected cases, operations on the urinary tract constitute over four per cent. of the total operative work; and experience has shown that in order to clear up doubtful diagnoses in other abdominal conditions and to eliminate inoperable cases, at least four patients require cystoscopic examination for each one actually operated for a surgical lesion of the urinary tract. It is thus seen that cystoscopic and X-ray examinations of the urinary tract should constitute a routine step in the diagnosis of surgical patients whenever there are symptoms pointing to even a possible involvement of the urinary tract.

The data obtained by the cystoscope, the ureteral catheter and the X-ray is positive and cannot be contradicted by objective or subjective symptoms. With correct data, such as may be obtained in practically every case, a diagnosis of lesions of the urinary tract can be made with more certainty than in any other of the internal organs, but the problem of obtaining this data is by no means a simple one, and unless each step of the examination be carried out with precision and almost mathematical accuracy, the results are more than likely to be positively misleading. In this respect the work is not unlike a problem in mathematics or quantitative chemistry, where, if each step is carried out accurately and in proper sequence the results are certain to be correct, but if any error be made, the results are equally certain to be wrong.

In our experience, and in the observation of the work of others, it soon became evident that most of the mistakes were due to errors which were in kind almost exactly comparable to a faulty technic in quantitative chemical work. Furthermore it was evident that while the X-ray is an invaluable aid, it alone is not capable of giving sufficiently accurate data for diagnosis in a great majority of cases including many calculus patients. The cystoscope and ureteral catheter are sufficient for diagnosis in a much larger proportion of patients but they alone, fail in many instances, especially in the accurate localization of ureteral obstructions which constitute a most important factor in operable surgical lesions of the upper urinary tract. It is only when the X-ray, the cystoscope and the ureteral catheter are used in combination, that an accurate diagnosis becomes possible in practically all cases and the problem of diagnosis thus becomes largely one of combin-

ing the several diagnostic procedures in such a manner that the short-comings of one will be supplemented by the positive findings of the other.

In order to obtain the best results the cystoscopist and radiographer must work together and their combined technic should be so planned as to meet the following requirements.

1st. The examination must be practically painless and must not be unduly prolonged.

2nd. The completed examination must give an orderly collection of accurate data which together will constitute all of the facts necessary for an accurate diagnosis.

3rd. The various steps of the examination must be so planned that one step does not interfere with another, else repeated examinations will be necessary.¹

4th. Any plan adopted must be capable of modification to suit individual cases without breaking the technic as a whole.

The following is a brief outline of the technic which has been evolved by my assistant, Dr. Mason and myself for the combined X-ray and cystoscopic examination of the urinary tract. Except in the cases of bedridden hospital patients the examinations are all made at the office in a room especially fitted for this purpose.

The individual steps are none of them original with us, the problem which we have had to solve being one of selecting the most useful procedures and combining them in such a way as to enable the completed examination to result in an accurate diagnosis obtained with the best possible inconvenience to the patient. As a matter of fact, most of the examinations themselves are completed within thirty minutes with no more inconvenience to the patient than the ordinary passing of a sound.

Preliminary Preparation. It is desirable to have the bowels thoroughly evacuated by two ounces of castor oil given the day before the examination, but when the X-ray findings are checked by the cystoscope this preliminary evacuation of the bowels is not absolutely essential.

History and Physical Examinations. As a first step in the examination, a complete history is taken and an ordinary physical

¹ While in hospital cases repeated examinations are possible they take up an unnecessary amount of time on the part of the examiner and it is a fact, proven by practical experience, that private cases seen in consultation will not willingly submit to a series of incomplete examinations, so that it is highly desirable to complete the entire examination in one period.

examination made with as much care as if no other data were to be available in the case. A blood pressure determination should be a routine part of this examination and in some cases a blood count is of value. In the male a bimanual rectal examination is as important as the usual pelvic examination in the female.

Preliminary Urine Examination. The examination of the fresh bladder urine both chemical and microscopic should be completed before beginning the cystoscopic examination. In the male this should be obtained as for a three-glass test while in the female it should usually be a catheterized specimen obtained by the nurse when preparing the patient for the physical examination.

Preliminary Functional Determination. In a few cases, notably those with enlarged prostates and patients in whom an extensive destruction of one kidney is suspected, it is well to make a preliminary determination of the combined functional activity of both kidneys by the phenolsulphonephthalein test before the cystoscopic examination. By so doing the functional determination made at the time of the cystoscopic examination need only be an estimation as to the relative activity of the individual kidneys. This preliminary functional determination necessitates postponing the cystoscopic examination for twenty-four hours but as the test itself is easily arranged so as to cause practically no inconvenience to the patient, the advantages gained are well worth the time consumed.

X-Ray and Cystoscopic Examination. The cystoscopy must be done on a table suitable for X-ray work and the X-ray machine so located that the pictures can be taken without moving the patient or interfering with the cystoscopic examination.

With proper anaesthetization of the urethra the cystoscopic work is practically painless. The writer uses four per cent. cocaine in the female and alypin inserted with a Brandsford Lewis depositor in the male.

In cases with very irritable bladder (tuberculosis) nitrous oxide and oxygen given by the Gatch method is very satisfactory for either a short or long anaesthesia and can be given as an office anaesthetic the same as in dental work.

Whenever a lesion of the upper urinary tract is suspected, a radiograph, including the region of both kidneys and ureters on

a single plate, is taken as soon as the patient is on the examining table. This plate is developed at once and is ready for examination by the time the urethra is anaesthetized and we are ready to proceed with the urethral exploration. This plate settles at once the question of stone shadows² in both kidneys and ureters and even in the absence of stone, other shadows are sometimes of value for comparison if collargol injections are made.

The Brandsford Lewis depositor which is used in anaesthetizing the male urethra serves at the same time as a means of exploring the urethra for stricture or prostatic obstruction.

Any good double catheterizing cystoscope will serve for the cystoscopic work, the essential thing being perfect familiarity with the instrument used. In about 95 per cent. of our work I use the simple endoscope of the Elsner-Braasch type in preference to the more complicated telescopic cystoscopes. This instrument can be used with equal facility in either male or female, gives a view free from distortion, allows of ureteral catheterization with only a few drams of fluid in the bladder, is not interfered with by hemorrhage and serves admirably as a urethroscope for both the prostatic and anterior urethra.

Proceeding to the examination of the bladder itself one is able to diagnose positively the presence or absence of cystitis and its severity, new growths, stones within the viscus, diverticulae in its walls, the presence of trabeculation due to urethral obstruction or spinal cord lesions, the condition of the prostate in relation to the bladder and its size, also the condition of the ureteral openings, and the gross character of the urine coming from either kidney. This bladder examination takes but a minute or two at most, and unless the diagnosis is completed with the bladder examination we proceed at once to the ureteral catheterization after noting carefully the condition of each ureteral orifice.³

In passing the ureteral catheters particular attention is paid to any obstructions or resistance which may be encountered, and if present, the distance of the same from the bladder is at once recorded and if passed by the catheter any continued resistance or

² In very obese patients in whom the presence of a stone is strongly suspected and the X-ray fails to show a shadow the wax-tipped ureteral catheters of Kelly may be used as a further means of exploring for stone.

³ Tuberculosis is nearly always recognizable by the condition of the ureteral orifice, and most of the other lesions of the kidney and ureter are accompanied by fairly characteristic changes in the ureteral orifice on the affected side.

grating is noted. After passing the obstruction the flow of urine from the catheter is noted with special care because if a hydro-nephrosis is present above the obstruction it will be indicated by a continuous flow of urine, and the amount of the residual urine drained from above the stricture is of value in estimating the degree of hydronephrosis. In our experience some resistance is encountered in passing the ureteral catheter in about one quarter of the ureters catheterized but true obstructions are by no means as frequent and it not infrequently happens that a true obstruction to the downward flow of urine is passed from below by the ureteral catheter with scarcely palpable resistance. If the apparent obstruction is of no importance surgically, a normal intermittent flow of urine from the catheter will be noted at once while if there is a true obstruction the flow of urine will be continuous until the hydronephrotic sac is drained.

As we have never seen any ill effects either immediate or remote from ureteral catheterization we make it a rule to catheterize both ureters in nearly all cases and usually the catheters are passed to the pelvis of the kidney (27 to 30 c.m.) unless an impassable obstruction is encountered lower down.

Immediately after the catheters are inserted the collection of the urine from the separate kidneys is begun and continued until a sufficient quantity is collected. In collecting the urine in this way the writer has found the rack containing a series of sterile test tubes of 5 c.c. capacity of great service. In this way the rate of flow can be accurately estimated, there is no danger of the patients upsetting the specimen, the end of the catheter is easily retained in the test tube by the aid of the cotton stopper while the urine is collected under aseptic conditions. It may be centrifuged in the original tubes without loss or contamination and if desired, the phenosulphonephthalein functional test of the individual kidneys may be carried out without in any way interfering with the other urine tests by simply transferring the catheters from one tube to another at stated intervals.

By a microscopic examination of the urine obtained through the catheter we are able to diagnose pyelitis, double or single, hemorrhage from the kidney, and the presence of nephritis, and by staining or culturing the sediment we are able to isolate the

micro-organisms, if any be present. Information concerning the function of the kidney is obtained (1) by collecting enough urine from either side so that the specific gravity can be taken, (2) by observing the amount of urine passed in a given time or in comparison with the other kidney, (3) by the amount of time necessary for a previously injected substance to be secreted by the kidney and the time of its appearance in the urine.

After a sufficient amount of urine has been collected from the diseased or suspected kidney we are ready to determine the position and outline of its pelvis and ureter by pyelography without interfering with the collection of urine from the opposite kidney.

If the X-ray plate taken at the beginning of the examination shows any evidence of renal or ureteral calculus or if any evidence of a hydronephrosis either simple or infected has been discovered or a tumor is suspected or we desire to ascertain the exact position of the kidney, the pelvis on the affected side is now filled with a ten per cent. solution of collargol and an additional radiograph taken to show the outline of the pelvis and ureter filled with the collargol solution. In our experience we have found the data obtained by pyelography of more real diagnostic value than that obtained by any other single means employed in the examination. The knowledge gained in this way may be summarized as follows:

1st. It definitely locates the position of the kidney and usually also the ureter. (See Figure I.)

2nd. Real obstructions in the ureter are accurately located by noting the lower limit of the hydronephrotic sac which forms above the obstruction. (See Figure 4.)

3rd. Stones may be accurately located by comparing the collargol plate with the plate taken at the beginning of the examination. (See Figures III, IV, V.)

4th. The capacity of a hydronephrotic sac can be accurately determined by noting the amount of collargol solution it takes to fill the sac and this is confirmed by the outline as shown in the collargol plate. (See Figures IV, II, V.)

5th. Tumor growths may be often recognized by the irregular outline of the pelvis. (See Figures V, VI.)

To Illustrate Dr. Stanton's Article on "The Diagnosis of Diseases of the Urinary Tract by the Combined Use of the Cystoscope and the X-Ray."

Albany Medical Annals, July, 1912.



FIG. I. Normal renal pelvis filled with collargol solution

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FIG. 11 Double pyelonephrosis secondary to enlarged prostate. Collargol injection shows irregular outline of pelvis due to hydronephrosis and suppurative destruction of kidney substance.

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FIG. III. Stone in pelvic portion of ureter. (See Fig. IV.)

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FIG. IV. Ureteral obstruction (stone) at X with hydro-ureter and hydronephrosis above obstruction. (Same patient as plate III).

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FIG. V. Stone in pelvis of kidney producing moderate hydronephrosis.

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Albany Medical Annals, July, 1912.



FIG. VI. Malignant tumor of kidney showing irregular outline of pelvis.

In our early work with collargol we often produced a rather severe renal colic, which inconvenience has been apparently eliminated, since I have used a biurette instead of a syringe to fill the pelvis of the kidney with the solution. The slow, regular filling of the pelvis by means of the biurette seems to be less likely to produce colic than when a syringe is used, while with the biurette the capacity of the pelvis can be more accurately estimated by noting the quantity which has run in up to the time of the production of the first discomfort or up to the time a return flow along the side of the catheter is first noticed; this latter is indicated by the return of the solution through the open irrigating cock on the cystoscope or through a third catheter introduced into the bladder before removing the cystoscope.

The entire examination should not take more than a half hour. The requirements for success are a thorough knowledge of the pathology of the urinary tract, a first-class X-ray outfit and radiographer and a definitely planned cystoscopic technic, every stop of which is carried out with accuracy and precision.

ANATOMY OF THE INTESTINES.

*Read before the Medical Society of the County of Albany,
February 13, 1912.*

By JOSEPH D. CRAIG, M. D.

On account of the shortness of the time at my disposal and the considerable material necessary to go over in a complete anatomical description of the anatomy of the intestines, I have thought it wise to limit my remarks to certain features of intestinal anatomy which might be of practical interest to the members of the Society.

In order to present graphically the subject under consideration, I have determined to offer a lantern demonstration with explanatory remarks rather than to prepare and read a paper on this subject.

The following presents an abstract of the subject as I desire to present it, illustrating each point with one or more drawings projected on the screen.

A. The embryology of the intestine in relation to Meckel's diverticulum and the position of the caecum and vermiform appendix.

1. The original straight intestinal tract with fore-gut and hind-gut and omphalo-mesenteric canal.
2. The initial bending of the intestinal tract, offering an explanation of the occasional presence of Meckel's diverticulum and the beginning of the caecum and vermiform appendix.
3. The movement of the vermiform appendix and caecum from its original point of development around the course of the large intestine to its adult position, with explanations of the variation in the position of the vermiform appendix and the occasional doubling of the large intestine.

B. The unit of structure of the intestines.

1. The structure of the wall of the intestine. (a) External fibrous coat. (b) The middle muscular coat with external longitudinal and internal circular layers. (c) The internal mucous coat.
2. The reason for the presence or absence of sub-mucous areolar tissue.

3. Crypts of Lieberhünn.

4. Lymphoid follicles.

5. Villi.

C. The arterial, lymphatic and nervous supply.

D. The segmentation of the anterior abdominal wall with its nerve supply and the communication between these nerves and the chylopoietic viscera.

1. Myotomes and nerve supply.

2. The coalescence of the muscular elements, their progress and eventual sub-division to form abdominal muscles. (a) Rectus abdominalis. (b) The three superimposed flat muscles.

3. Practical inference.

SYMPTOMS AND DIAGNOSIS OF DISEASES OF THE INTESTINES.

Read before the Medical Society of the County of Albany.

February 13, 1912.

By T. FREDERICK DOESCHER, M. D.

Just as the examination of stomach contents has materially aided in the diagnosis of gastric complaints, so in the diagnostic differentiation of intestinal disorders, particularly those of a functional character, the examination of stools has thrown con-

siderable light. In view of the immensity of the subject allotted to me to-night, I shall limit myself to a brief discussion of the diagnostic aids to be drawn from an examination of the stools in the hope that it may be of service to the busy general practitioner. In this connection, let me state that I have followed Schmidt, the leading authority in this field, very closely.

Aside from the ordinary aids of physical diagnosis, an examination of the feces offers absolutely the only solution for the detection of functional disorders of the gastro-intestinal organs. Owing to their inaccessibility we can use neither tubes nor electric lights, and the methods of Hemmeter and Boas in removing duodenal contents cannot be used in general practice. If this is so, and there is no denying it, why are the stools examined so seldom? Surely, prudery has no place in medicine, and simply because a certain diagnostic procedure is unpleasant, is no reason why it should not be employed. Furthermore, the examination of the stools is simple. As stated by Schmidt, it takes about fifteen minutes, and, speaking from a laboratory point of view, is in the same class as the examination of the urine or stomach contents.

The ordinary examination of the stools is much more valuable clinically than the extensive chemical tests which have been done in experiments on metabolism and digestion. Those examinations lose sight of the fact that the gastro-intestinal tract is not a long tube into which material is poured at one end and comes out again at the other after the blood has exacted its toll; but is an important organ of excretion. Chemical tests lump together the waste nitrogen and fat with the substances containing nitrogen and fat excreted from the body itself. Strassburger has calculated that in an easily digestible diet, at least half the nitrogen present is due to the intestinal bacteria; while Rubner has found 3 to 6 grams of fat daily in almost fat free diet. Furthermore, it is much more important to know whether the waste albumin in the feces is present either as muscle or connective tissue, or both, than to know the total amount excreted; and whether the starch present is free or enclosed in its shell of cellulose.

In order to have what Schmidt calls a normal feces, that is a uniform feces in all cases, we must have a uniform diet. Any-

one who has done a considerable number of fecal examinations will realize that the amount and kind of food ingested are much more important than the actual condition of the intestines. An individual may modify this diet within certain limits, to suit his own caprices or the patient's taste; though I am convinced that the test diet of Schmidt is the most suitable for all purposes. In brief, the following fundamentals must be observed—(a) a certain amount of milk ($\frac{1}{2}$ to $1\frac{1}{2}$ liters), all of which may be boiled with the food, (b) about 100 grams of white bread, (c) a portion of potato broth (about 200 grams), (d) $\frac{1}{4}$ pound of chopped beef, a portion of which must remain raw.

After this diet has been given for three days or even longer, until we know of a certainty that the stool we examine comes from this diet, the stool is collected in a suitable container (the ordinary pint fruit jar serving admirably) and examined as soon as possible, while fresh.

A. MACROSCOPIC EXAMINATION.

This is the most important part of the examination, and often a diagnosis can be made from this alone. Color, form, consistence and odor are now determined.

Color.—The normal stool is light yellowish-brown or reddish-brown depending on whether milk or cocoa has been used in the diet. In diseased conditions, only tar feces due to blood, and clay feces due to fat, are worthy of consideration and are easily recognized.

Form and Consistence.—These are extremely important. Some stools show hard stone-like scybala, the typical sheep stool. These masses may remain in the gut a long time and cause explosive diarrhoeas and thickening of the intestinal wall particularly at the flexures; and who knows but that certain carcinomata may be caused by this long continued irritation. Other stools show thin ribbon-like pieces. Contrary to general belief, these are not due to intestinal stricture, but rather to a spastic constipation. Stools in intestinal stricture are usually soft or fluid with several small cylindrical masses, the size of the little finger, floating in it. Or the stool may be soft and mushy as after certain cathartics, or finally, be absolutely watery. The normal stool is yellowish-brown, cylindrical and quite solid.

Odor.—Normally the odor is mildly excremental; but may be bitingly acid due to fermentation, or malodorous due to putrefaction. Furthermore, it is easy to recognize macroscopically the presence of mucus, blood, pus, tapeworm, stones and foreign bodies. Let me state here that it is extremely important to determine the extent of the admixture of these substances with the feces; and if they are but imperfectly mixed, and easily recognized apart from the fecal mass, it usually indicates that they come from low down in the tract.

A small portion of the stool is now ground up in a mortar with the addition of water, to the consistence of thin gruel, and poured in a thin layer over a flat surface with a black background. The normal stool is absolutely homogeneous.

Pathologically we may find:

(1) *Connective tissue*—as small whitish-yellow shreds. A few may be seen in normal feces—many of them indicate a disturbed gastric digestion.

(2) *Muscle tissue*—appears as small friable brown rods which look like splinters of wood. Many of them indicate a disturbed intestinal function.

(3) *Potato remains*—these appear as small transparent granules resembling sago and may be mistaken for mucus. The mucus spreads out flat, while the sago-like particles of potato stand out from the fecal mass.

(4) *Fat remains*—are easily recognized by the light color and clay-like consistence of the stool; and sometimes soft yellow lumps of fat are seen.

(5) *Mucus*—appears as small transparent flakes, or thick gray or grayish-brown ropy masses.

B. MICROSCOPIC EXAMINATION.

Three slide preparations are made from the previously well liquefied feces. The first is a loopful of the feces to which nothing is added and which is examined immediately after crushing a cover glass down upon it. To the second a drop of 36 per cent acetic acid is added, boiled and examined at once. To the third a drop of Lugol's Iodine solution is added. Pathologically, the first will show many muscle and connective tissue fibers, neutral fat droplets, mucus, pus and parasite eggs. In the sec-

ond, all the fat remains are melted, and may be viewed at once as larger and smaller fat droplets. In the third, undigested starch shows up as bright blue granules.

C. CHEMICAL EXAMINATION.

This is extremely simple. (1) *The reaction*, with red or blue litmus. Normally the reaction is neutral, or at most feebly alkaline or acid. (2) *The sublimate test for bile*. Some of the ground up feces are placed in a flat vessel or test tube, and a concentrated watery solution of corrosive sublimate added, stirred, and allowed to stand twenty-four hours. Normal feces are colored red, due to hydrobilirubin. Particles, even very small, which are colored green are pathological and indicate unchanged bile pigment (bilirubin). (3) *The fermentation test*. For this a Strassburger fermentation tube is used. Normally but little gas is found—if during the process, the reaction has become more acid, carbohydrate fermentation has occurred—if more alkaline, albumin putrefaction has taken place. Usually for ordinary clinical purposes, this test is superfluous as in most cases it can be readily determined if the stool is light brown, foamy, and of a biting odor due to fermentation, or if it is dark brown, alkaline and putrefactive. (4) *Blood*. For general use, the guaiac test as modified by Weber is probably the best. A portion of the liquefied feces is placed in a test tube, one-third the quantity of glacial acetic acid added and shaken. Next pour some ether into the test tube and carefully mix, but do not shake as the ether separates with difficulty. Pour off the ethereal extract, add a small amount of a freshly prepared tincture of guiac and a few drops of peroxide. A blue color indicates blood unless considerable pus is present.

CLINICAL SIGNIFICANCE OF SOME OF THE COMMONER FECAL FINDINGS.

1. *Mucus*.—This always indicates intestinal catarrh with the possible exception of certain cases of mucous colic, where a nervous overproduction is probably responsible. Mucus and muco-pus are absolutely reliable indications of inflammation. The higher in the tract from which the mucus comes, the smaller are the flakes, and the more apt to be associated with pus and

small epithelial cells. If the sublimate test shows particles of green, this supposition is converted into fact.

2. *Bile*.—Hydrobilirubin, a reduction product of bilirubin (which latter is normally present high up in the intestinal tract), is the normal biliary derivative in the feces. With the sublimate test this gives a red color, while bilirubin turns green. When the latter is present it indicates either imperfect reduction (a condition in which the intestinal bacterial flora probably play an important part), or a diarrhoeal condition in which there has not been time for a complete reduction. A complete absence of color indicates either a temporary cessation of the outflow of bile (as in the occasional cases of clay colored stools without jaundice), or a complete biliary obstruction.

3. *Fat*.—A typical fatty stool is easily detected. Since the fat content of feces is normally about one-quarter of the dried substance, it is easy to see that slight variations have no definite significance. These stools are white or clayey in appearance, abundant in amount, and acid in reaction. They may occur in (1) biliary obstruction either complete or partial. Here icterus is present, and little or no reaction is obtained with the sublimate test; (2) in pancreatic disease—the difference between fatty stools caused by (1) and (2) is that in the latter a far smaller percentage of the fat suffers cleavage, which means that steatorrhea is not, *per se*, diagnostic of pancreatic disease, whereas disturbed digestion of fat is. We may safely say that, in the absence of jaundice, fatty stools are probably due to pancreatic disease.

4. *Meat and Connective Tissue*.—A normal individual can digest about four ounces of beef per day; and if this is finely chopped and part remains raw, no muscle or connective tissue should appear in the stools macroscopically. If connective tissue appears, the stomach is at fault, as in achylia gastrica; if muscle appears, the small intestine is the offender, as in pancreatic disease. Very little meat solution occurs in the stomach, whereas the gastric juice alone can digest raw connective tissue.

5. *Fermentation and Putrefaction*.—The former occurs in acid frothy stools of biting odor and usually contains a considerable excess of free starch. Starch is digested in the small intestine, and free starch in the stools means a disturbance of the secretion

of the intestinal juice. If the feces show no other pathological alterations, it has very little significance. On the other hand, the putrefactive stool is malodorous, strongly alkaline, and associated, not with functional, but with gross lesions in the intestines, as such products as mucus, blood, and pus very easily undergo putrefaction. Such stools usually contain triple phosphate crystals.

Motility.—We have no good guide to judge motility. The food stays in the large intestine about fourteen hours, while it passes through the small intestine, which is five times longer, in from two and a half to four hours. Properly speaking no digestion occurs in the large intestine; therefore it is easy to see how important it would be to know how long the food stays in the small intestine. The only means we have at present is to give bismuth and use the radiograph.

Secretion.—In considering disturbances of secretion we have found that macroscopic connective tissue in the stools means that the stomach is at fault; while meat in the feces throws the responsibility upon the small intestine. This may be due to deficient secretion of pancreatic juice, or lack of the activating enterokinase, or too rapid peristalsis. Free starch in the stools shows definitely that the small intestine is at fault, since animal experimentation has proved that no starch diarrhoea occurs when both saliva and pancreatic juice are withheld from the intestinal tract.

The pancreatic is the most important of the digestive juices; and an easy and reliable clinical test to determine pancreatic integrity has not, as yet, been forthcoming. We know that in certain forms of pancreatic disease, a positive sugar reaction is obtained in the urine; and yet in many of these cases the stools may be absolutely normal. When Cammidge's urine test was first introduced, it gave great promise of solving this difficult problem. But it is too difficult to perform in ordinary practice in the first place; and secondly, it is still under consideration, as many able men have spoken against it. At best it gives no indication of the secretory power of the pancreas.

From the meager statistics at hand, and from my own much more meager experience, Schmidt's nuclei test seems to be the best to determine pancreatic function. Small cubes of fresh

beef, one-half centimeter in diameter, are hardened in alcohol, placed in little silk gauze bags, and served in a wafer for several succeeding days at noon. They should be thoroughly rinsed in water before serving. Enihorn uses the thymus gland as it is richer in nuclei. These little bags are easily recovered, and searched for nuclei. Many times this can be done in the fresh specimen; at others, the cubes must be fixed, hardened, sectioned, stained and examined. If well preserved nuclei are found after recovering the small bags, it is safe to assume that the pancreas is not functioning satisfactorily.

In conclusion, it must not be forgotten that all intestinal disorders are not due to intestinal derangements *per se*. Some are gastrogenetic, some hepatogenetic, and others pancreatogenetic. These must always be borne in mind, and excluded, before attention can be turned to the intestinal tract proper.

CONSTIPATION—ITS TREATMENT.

Part of a symposium on "Diseases of the Intestines" read at a meeting of the Albany County Medical Society February 13, 1912.

By ANDREW MACFARLANE, M. D.,

Professor of Physical Diagnosis, Albany Medical College.

The treatment of diseases of the intestines which has been assigned to me is so broad in its etiology, so complicated in its physiology and pathology and so diffuse in its therapy that it has seemed more valuable in the time at my disposal to limit this paper to a condition which from its omnipresence is easily the greatest ill of mankind.

Cabot in analysing about 5000 cases of abdominal pain (largely non-surgical) found that almost 70 per cent. were due to constipation. It is probably no idle statement — that if constipation was universally corrected, one half of the ills of mankind, physical and mental, would be removed.

Constipation is defined as the unnatural delay in the passage of the intestinal contents.

Intestinal movements may occur daily, every second day or even at longer intervals and yet there may be no constipation provided that this is the natural habit of the individual. Consti-

pation is usually associated with an insufficient quantity of the intestinal contents or with abnormal hardness and dryness.

A daily evacuation is probably the norm for the great majority of mankind. As this delay does not occur in the small intestine but only after the caecum has been reached, two divisions can be made.

(1) Constipation in the colon.

(2) Constipation in the collecting chamber—the rectum.[†]

The first form is largely automatic while the second is to a very great extent voluntary. The contents of the small intestine are liquid and subject to two movements—(1) peristaltic, the pushing forward of the intestinal contents; (2) rhythmic local constrictions to aid absorption. 97-99 per cent. of proteids as meat, eggs and milk are absorbed by the small intestine while 17-30% of vegetable food containing much cellulose are unabsorbed.

Liquid chyme is discharged into the caecum four and a half hours after the ingestion of food. The caecum and ascending colon act as a second stomach with peristaltic and antiperistaltic waves delaying and thus absorbing a large part of the chyme and pathologically retaining a considerable portion of the chyme for several days.

The movements of the colon are slower than those of the small intestines and as the intestinal contents advance, they become more solid, assume a dark brown color due to the change from bilirubin to hydrobilirubin and manifest a faecal odor mainly due to skatol.

Hertz has determined by X-rays that the intestinal contents reach the hepatic flexure in six and a half, the splenic flexure in nine, the sigmoid in twelve and the rectum in eighteen hours after the ingestion of food with bismuth. The intestinal movements are the result of reflexes induced by mechanical and chemical stimuli which cause contraction above and relaxation below the points stimulated. Remnants of vegetable food consisting largely of cellulose and acids are the most effective stimuli.

The importance of mechanical stimulation is seen in herbivora who die if there is insufficient cellulose in their food, in carnivora who must have bones to gnaw, and birds who require sand

[†]This form is usually easily determined by digital examination.

and feathers added to their nutriment. The chemical stimuli are the organic acids as acetic, formic, butyric, tartaric, citric and lactic developed from the fermentation of the carbohydrates or present in vegetables and fruit.

Muscular activity also aids intestinal movements by strengthening the abdominal muscles and diaphragm. The entire intestine below the splenic flexure is emptied in the act of defaecation. The contents advance to the pelvic-rectal flexure but nothing enters the rectum until just before defaecation when the entrance of some of the faeces into the rectum produces the sensation of fulness in the rectum or weight on the perinaeum "the call to defaecation." The passage of faeces into the rectum may be the result of active peristalsis of the colon induced by the entrance of cold water and food into the stomach, the cold bath, the muscular activity in dressing and the morning smoke which is said to act by its nicotine on the sympathetic ganglia. Voluntary contraction of the abdominal muscles and the diaphragm may force faeces into the rectum and then the complete contraction of the abdominal muscles and diaphragm, increasing four to eight times the intra-abdominal pressure, continues the act. When defaecation ceases to be under the control of the will, constipation results as this first sensation of discomfort is not felt. If this first signal is not quickly obeyed, it soon passes away as the rectum easily accommodates itself to the presence of faeces which then no longer induce the desire to defaecate.

The principal causes of constipation are

(1) *Irregular habits*.—The call to defaecation is neglected largely because of ignorance of the seriousness of its neglect and frequently because of laziness and false modesty which postpone the natural time.

(2) *Dict.*.—Insufficient food and a diet which is too completely absorbed. This latter does not result in improved nutrition as it is neutralized by the poor appetite resulting from the constipation.

(3) *Lack of exercise*.—Obesity. Fatty infiltration of the intestinal and abdominal muscles with reduced tonicity. Loss of fluid due to excessive sweating with resulting dryness of the intestinal contents.

(4) *Gastric*.—Increased acidity of the gastric secretion is usually associated with constipation due either to a delay in the emptying of the stomach or more commonly the result of the bland diet which these patients usually take.

(5) *Nervous Influences*.—Depression of the nervous system as in neurasthenia, hypochondriasis and especially melancholia has as one of its common accompaniments atony of the colon.

(6) *Local Obstructions*.—Kinking of the intestines associated with visceroptosis is frequently a cause of constipation. To the muscular atony is added the local obstruction with the resulting faecal retention and symptoms of auto-intoxication.

Localized peritoneal adhesions first described by Virchow have been recently brought to the attention of the profession by Lane and are now commonly called Lane's Kinks. The caecum mobile is part of this general condition, enteroptosis, and merits special mention only because of the important function of the caecum and ascending colon as the terminal absorptive organ. Organic stricture and pressure from outside the intestine are not considered.

(7) *Deficiency of fluids*.—This may be due to an insufficient quantity of water drank, excessive loss of fluids by other channels, or increased absorption by the intestines.

Women almost always drink too little water and the body accommodates itself to this deficiency which results in abnormally hard and dry faeces. In diabetes the excessive quantity of urine voided is the main cause of the associated constipation. When the skin is unduly active the same condition results.

Habit is practically man's nature. We think, we act, we are very largely from habit. This refers not alone to the voluntary functions of man but also to a very great extent to the automatic.

The savage with his primordial instinct trains his young while the ultra-civilized are too often neglectful of these first instincts of mankind.

TREATMENT.

Education and Re-education.—Children should be trained early to go at a definite time each day, usually best directly after breakfast as the remnant of the food of the day before has now

reached the colon. The glass of cold water on arising, the bath, the natural exercises in dressing and the breakfast itself all tend to stimulate the activity of the colon. The closet seat should be sufficiently low and should slope slightly downwards and backwards so as to allow the squatting posture, thus bringing into full play the abdominal muscles and the diaphragm, to be easily assumed.

In the case of the busy man who must hurry in the morning to his occupation the leisure of the early evening may be selected.

The time is not of as much importance as the regular habit which is truly vital. Nothing is so important in the training of the young and no foolish prudery should interfere with its accomplishments.

Diet.—Errors in diet are among the commonest and most easily corrected causes of constipation. Stimulation may be insufficient from

(1) Too little food. This is a common fault in those women who are dainty eaters. No glutton is constipated.

(2) Food containing too restricted mechanical and chemical excitants. This condition is due to our modern epicureanism and usually results in too complete absorption with slight remainder.

Food should be eaten slowly and thoroughly chewed as lumps of undigested food may cause enterospasm with resulting constipation.

Stimulation of the intestines depends upon the irritation of the cellulose, distension due to food and the presence of acids.

A vegetable diet stimulates the intestinal secretions, furnishes the material for the growth of bacteria which distend the intestines and increases the speed of the intestinal contents so that less water is absorbed.

The value of this diet as a laxative depends not alone upon the cellulose it contains but also upon the organic acids. Oils and fat are of especial value in the emaciated and in patients with a tendency to intestinal spasm.

Milk has almost no influence upon intestinal activity except when much is taken and as a result the quantity of solid food is correspondingly diminished.

Lack of exercise tends to weaken the abdominal muscles and diaphragm thus impairing the intestinal function of propulsion.

Sufficient fluid should always be taken.

Pawlow has demonstrated that water stimulates the flow of the gastric secretion and also excites that of the pancreas. Hawk has shown that there is no ill effect from the drinking of water with meals but that there is a better digestion manifested by a more complete utilization of the protein food and a pronounced improvement in the digestibility of fat. There was also a diminished output of bacteria in the stools. This does not endorse however the vicious American habit of the drinking of ice water.

No mention need be made of drugs as the attempt should be made to correct the conditions without the use of drugs. There are undoubtedly patients who seem to require a slight intestinal stimulant and who can take practically all their lives some simple drug without the need of constantly increasing the dose or changing the form of the remedy. Whether the effect in these cases is not largely suggestive is a question. The great majority unfortunately have a far different story to tell. They go from larger to larger doses and from drug to drug in their sysyphean efforts at relief. Probably today more money is spent for "pills" than upon all other remedies combined. The medical profession is not without blame and the public has only followed where we have led. One remedy which seems to fulfill the physiological requirements in selected cases might be mentioned.

Agar-agar a hemi-cellulose, prepared from the East Indian sea weed, absorbs five times its bulk of water and as a result adds to the quantity and therefore the stimulating properties of the intestinal contents.

Schmidt has combined agar-agar with a small quantity of cascara and has given the name regulin to the combination. It is indicated in constipation resulting from a highly refined diet, in the obstipation of neurotics and in that of the undernourished and underfed.

Enemata.—In cases of constipation when there is a hard accumulation of faeces in the rectum or when an immediate evacuation is desired, enemata of various kinds may be employed.

They exert their actions by the distension due to their bulk, by the temperature at which they are given and by the substances which are added.

It is of interest, that an Egyptian papyrus dated 1400 B. C. gives directions for the preparation of enemata and that the Egyptians, according to Pliny, followed the example of their sacred bird, the ibis, in this particular.

X-ray pictures show that the ordinary enemata easily reach the caecum and that it is useless to try to introduce a soft tube more than three or four inches as it bends upon itself when the attempt is made.

The temperature of the water should usually be that of body heat but the greatest effect of a enema is obtainable at a temperature between 60° and 70°F. Among the substances commonly added are soap, turpentine, glycerine with or without salts, asafoetida, ox gall and oils.

Oil enemata commonly supposed to have been first recommended by Kussmaul in 1893, were employed as early as 160 B. C. Fleiner has strongly endorsed their use as a treatment for chronic constipation. Four or five ounces of oil at body temperature are slowly introduced into the rectum on retiring and retained if possible all night. In the morning a satisfactory result is usually obtained. Often times evacuations result on several following mornings so that these enemata need to be repeated only two or three times a week.

Glycerine suppositories by their bulk and also their anhydrous quality are also effective. Glycerine acts as an irritant to hemorrhoids so it should not be used either in enemata or suppositories when they exist.

Nothing need be said of hydrotherapy, massage, voluntary massage, electricity and surgical procedures in the treatment of constipation. This paper is intended to point out a few simple methods which can easily be carried out in the correction of the ordinary cases of constipation which usually acquire the pill habit with its attendant ills.

Although treatment by printed formula is usually unwise as not allowing for personal differentiation, still it has its value in fixing upon the patient the value of a number of details which it would be difficult for him to recollect and thus easily neglected.

The following schema has been used by me for several years past in indicated cases.

A glass of cold water on arising

EXERCISE—15 MINUTES

Deep breathing	20-30 times
Body bending back- and forwards.....	10-30 "
Body bending sideways	20-40 "
Body turning	8-24 "
Knee bending and stretching forwards.....	4-8 "
Body circling	8-30 "
Sawing movement	10-30 "
Body raising	4-12 "
Leg raising sideways (not for women).....	6-16 "
Hewing movement (not for women).....	6-12 "
Throwing the arms back- and forwards.....	20-60 "
Knee raising forwards.....	4-16 "
Swinging arms sideways.....	30-50 "
Trotting movement without change of base.....	100-200 "

Eat Slowly and Chew Thoroughly

Breakfast

Fruit	Graham or bran bread with plenty
Oatmeal, hominy grits, cream and sugar of milk	of butter, honey, marmalade or jam
Eggs, fried or scrambled, bacon	Coffee, a glass of water

Systematic Habit to Nature's Requirements Absolutely Necessary
Luncheon

Small amount of fat meat or fish, as halibut, cod, salmon, mackerel	Glass of cider sweetened with a tablespoonful of milk-sugar or buttermilk
Green vegetables, spinach, cabbage, asparagus, onions, carrots, parsnips, turnips, tomatoes, watercress, lettuce	Raw and cooked fruits Graham or bran bread Water

Dinner

Vegetable soup	Dessert of coarse meals, fruits
Fish, meat and vegetables same as luncheon	Cider, buttermilk or light beer, water
Salads with plenty of oil, cheese	

Before Retiring

Stewed prunes, figs or other fruits
Glass of water

Avoid

Tea, red wine, cocoa and chocolate,
starches, rice, potatoes, sago, far-
ina and toast

Recipe for Bran Bread

1 cupful of bran; 3 cupfuls of en-
tire wheat; 1 pint of sweet milk
(buttermilk if preferred); 1
cupful of molasses; 1 teaspoon-
ful of salt; 1 teaspoonful of
saleratus

274 State Street.

SURGERY OF THE INTESTINE.

Read Before the Medical Society of the County of Albany,
February 13, 1912.

BY ALVAH H. TRAVER, M. D.

This subject is so large that it would be absolutely impossible for me to cover it in any way in a fifteen-minute paper, so I have decided to consider only one phase of surgery of the intestine, i.e., *The Cause of Death in Surgical Affections of the Intestine*. Even with this *limitation* I would be able to cover the subject in a very brief and unsatisfactory manner, so I will consider the cause of death in only some of the most *important surgical diseases* of the intestine.

Appendicitis. As appendicitis is responsible for a large percentage of the mortality rate in intestinal surgery, let us consider that first.

While we may not know the *cause* of appendicitis, we do know its *results*. We do know that the way in which appendicitis causes death is by the *spreading* of the *infection* from the *appendix*. Hence, if the appendix is removed while the infectious material is still confined within the appendix, there is practically no mortality. Dr. Murphy says, "A case of ruptured appendix is one improperly treated, for it should have been removed before it ruptured."

Most general practitioners feel that surgeons should limit their practice to the treatment of surgical diseases.

Is it not equally true that *major surgical affections* should be taken care of at *least in consultation* with a surgeon? Do you know of any medicine that will cure a cancer, or any medicine

that will affect appendicitis (except perhaps *cathartics* which do harm?) Is it fair to the surgeon to be called to operate on a case of appendicitis after the appendix has ruptured and peritonitis has developed and so have a high mortality rate? Is it fair to the public to make them fear appendicitis operations because of the still too high mortality rate, when we all know there would be practically *no deaths* if the appendix was removed while the infection was *still localized* within the appendix?

Wm. Mayo says, "The layman requires considerable explanation before he can be made to realize that the *risk is not in surgery but in delayed surgery.*"

Fowler says, "There is a time in the history of every case of appendicitis when operative treatment can be instituted with a mortality risk not greater than *one in 200*. On the other hand, many cases are finally turned over to the surgeon by the physician with not *one chance in 200 of recovery.*"

Murphy, speaking of appendicitis, says, "It seems to me that every death is chargeable directly to the people for not calling in the physician sufficiently early after the onset of the symptoms, or to the physician and surgeon for not acting promptly when called."

As soon as the appendix *ruptures*, the *mortality rate* is greatly increased, and added to this are the various *complications*, such as adhesions, hernia, and faecal fistula, injury to the female genital organs, etc." I think all surgeons agree that the proper treatment of appendicitis, except, perhaps the mild attacks, is operation early before the appendix *ruptures*. After peritonitis has developed, there is a difference in opinion as to the best line of treatment to be carried out. The old statement that many kinds of treatment for any disease proves that none of them is satisfactory is demonstrated in this condition.

There is a *high mortality rate* of cases of general peritonitis, no matter what line of treatment may be carried out. Fowler, in speaking of general peritonitis of appendicular origin, states, "The element of time plays the most important rôle and is the chief reason why statistics vary when apparently the same treatment has been carried out, though the virulence of the infection must also be considered. His mortality rate is as follows:

15 cases general peritonitis operated on, within 24 hours, no deaths; 85 cases general peritonitis operated on, within 48 hours, 19%; 122 cases general peritonitis operated on, within 72 hours, 22%; 174 cases general peritonitis operated on within 120 hours, 28%.

Thinking it would be of *interest to me*, at least, I looked over my records of appendicitis cases for the past five years to determine what was the condition of appendix found at time of operation in those cases that died:

Year 1907, operated on 24 cases, two deaths; year 1908, operated on 32 cases, no deaths; year 1909, operated on 20 cases, no deaths; year 1910, operated on 57 cases, no deaths; year 1911, operated on 47 cases, four deaths.

I had hoped by this investigation to learn that cases were being sent to me earlier than they were five years ago and that I was having a lower mortality rate. My records seem to prove the opposite to be the fact, for in 1911 I had more deaths than during the previous four years. Yet on looking up the histories of the four cases that died in 1911, it is seen that with the exception of perhaps one case the physician could hardly be blamed for not having the case operated on sooner.

CASE I.—Mr. A. 19 years of age. Had been sick three days. At operation, we found an acute inflamed appendix, complicated with many firm intestinal adhesions. Patient stood the operation well and was in good condition till about 18 hours after operation when his pulse became rapidly weak and he died. This case was operated on in farm house, the doctor was not present when the patient died and as no autopsy was done, we were unable to determine the cause of death.

CASE II.—Mrs. K. Age 31. Had been sick in bed for a week with rheumatism of both ankles and one knee. During this time, she had high fever and complained of pain in the abdomen. The physician who had charge of the case attributed the abdominal symptoms and fever to the rheumatism. Yet at operation, we found a gangrenous appendix and general peritonitis. Patient died as result of the peritonitis.

CASE III.—Miss S. Age 9. Patient had been sick for 6 days, but as there were cases of measles in the family, the parents thought she was suffering from measles and did not call a physician till the 6th day. As soon as he saw the case, he sent her to the hospital. At operation, we found a gangrenous appendix, a gangrenous condition of the caecum, and general peritonitis. The patient developed multiple faecal fistula and died.

CASE IV.—Mrs. S. Age 39. Operated on 16 hours after starting of attack. Appendix was found gangrenous but no general peritonitis present. Patient did nicely till the 9th day, when she died of pulmonary embolism.

Another interesting fact was found on looking over the case records. For one physician I had operated on 51 cases of appendicitis with no deaths. For another, 35 cases with no deaths, while for a third physician I had operated 13 times with 4 deaths.

Some of the cases of the first two physicians would have recovered without operation, or to make it stronger, I might say some of these cases may not have been cases of appendicitis at all; but in the case of the third physician, there could be no doubt, as he did not refer the cases to me until the appendix was ruptured and peritonitis well developed. Which of these physicians would you want to treat your family, one of the first two who may be over anxious yet has no deaths in 86 cases, or the third who waits until it is seen the case will die without operation and has one case in four die.

Before leaving the subject of appendicitis, I wish to quote from Moullin's surgery, written in 1898, showing the change in the treatment of appendicitis that has taken place during the past fifteen years. He says, "Perforative perityphlitis, if left to itself, may end in the abscess gradually working its way towards the surface, causing more or less serious destruction, or it may lead to sudden and diffuse peritonitis. Immediate operation is advisable if signs of perforation have suddenly appeared in a person previously healthy, if there is evidence of acute suppuration, particularly if it is spreading, or if there is any indication of chronic abscess working its way outward."

The rate of mortality following appendicitis operations with the above treatment was 18 to 20%, while to-day, with the early operation, it is 1 to 2%.

Another common cause of death in surgical intestinal diseases is intestinal obstruction. The acute obstructions are most commonly caused by hernia, intussusception, and volvulus, in the chronic cases by intestinal bands, adhesions and tumors.

I have not the time to discuss these various conditions except as they bear on the subject of this paper.

Hernia occurs so commonly that many think little of it, yet it is a frequent cause of death. The larger hernias are the troublesome ones but are less dangerous than the small ones, for they are readily seen and, in case of strangulation, an early diagnosis is made and an early operation performed with a very slight mortality rate. The small hernia that may only partly protrude through the abdominal wall are the dangerous ones for they may be overlooked, and, in case of strangulation, a diagnosis is not apt to be made until the intestine has become gangrenous, so, even with an operation, there is a high death rate.

In looking over my case records, I find that I have operated on 14 cases of strangulated hernia in patients over 60 years of age. The operation, in each case, was done under local anaesthesia, with but little pain or shock to the patient. In fact, two of these cases returned to be operated on for hernia on the other side, saying that they would rather undergo an operation than run the chances of having the other hernia become strangulated. Two of these cases died, which is a high mortality, but the histories of the two cases that died show that strangulation had existed several days and the intestine was gangrenous at time of operation. This proves that it is not the advanced age of the patient but rather the delay in operation that causes death.

Volvulus and intussusception occur so seldom that I will not consider them in this paper.

Intestinal bands and adhesions occur quite frequently, especially following operation in which peritonitis has occurred. These are the cases that are greatly harmed by cathartics. Instead of destroying the vitality of the intestinal wall by giving cathartics, have an early operation performed. If you have made a mistaken diagnosis and no obstruction is found, you have not done the patient great harm. But if you delay operation until you have positively demonstrated by the administration of cathartics that obstruction exists, you have destroyed most of the chances of recovery even with operation.

Ochsner says, "A statement which should be repeated many times and always regarded when any form of intestinal obstruction is considered, and even when there is the slightest suspicion

of the possibility of the existence of intestinal obstruction in any given case, is that it is absolutely unpardonable to give either cathartics or any form of nourishment by mouth. In our experience the mortality has been 10 times higher in patients who have been given cathartics before coming to the hospital suffering from intestinal obstruction, than in those who have received none."

In case the obstruction is caused by tumors, we have more time to study the case, yet, even here, we must not delay too long, for if we wait until the tumor is palpable the chances of recovery with operation are none too good. In these suspicious cases, an exploratory incision should be made. If surgeons, with the experience of the Mayos and Oschner, state that it is necessary to make exploratory incisions in order to arrive at an early diagnosis, we surely should not be ashamed to do likewise. For it is only by this means that a diagnosis can be made sufficiently early to get a fair percentage of recoveries in malignant diseases of the intestine.

I have not said anything new in this paper and probably nothing but what you already knew, yet I have endeavored to bring known facts to your attention in such a manner as to make you appreciate that it is the general practitioner who generally sees the case early and on him rests the responsibility of making an early diagnosis, or, in case of doubt, the necessity of calling consultation to aid in arriving at an early diagnosis; for it will be by earlier operation rather than by a more radical operation that we can do most to reduce the death rate in surgical diseases.

ON THE ANATOMY OF THE LIVER

Part of a Symposium on "Diseases of the Liver," read before the Medical Society of the County of Albany, January 9, 1912.

BY HOWARD E. LOMAX, M. D.,

Lecturer and Demonstrator of Anatomy, Albany Medical College.

Mr. President, Ladies, and Gentlemen:

In going over the anatomy of the liver I feel I am treading upon ground so well understood by the members of this society that my talk will seem like a rehash of a lot of facts you already know. I have absolutely nothing new to present as the anatomy

of the liver is so well and so thoroughly gone over in the text-books of to-day. I know very well you don't want me to give you a text-book account of the anatomy of the liver, and after debating the subject over in my own mind I have come to the conclusion that the wisest course to pursue will be to take up the subject more from the standpoint of Applied Anatomy, and in this way make the subject of equal interest to the physician, the surgeon, the diagnostician, and the medical student, of whom there are quite a few here to-night. To this end I propose first to take up the position of the organ, then its relations; its blood supply, including the portal and hepatic circulations, and its nerve supply.

The liver is tucked up in the upper right abdominal quadrant, extending over into the epigastric and left hypochondriac regions. It lies, for the most part, in the right hypochondriac region. Most of the organ lies above a plane, passed from above downwards and backwards along the free borders of the ribs and costal cartilages, and from this fact, and from the fact that it is covered up to a very great extent by the lower ribs and costal cartilages, it might be considered as one of the contents of the thoracic cavity. However, because of its functions, its connections and relations with the digestive apparatus, and because it lies below the roof of the abdomen (diaphragm), it is always considered as an abdominal organ. Most of the organ is covered over by the lower ribs, costal cartilages and intercostal muscles, save a small portion at the extreme right and the part in the sub-costal angle, which comes in direct contact with the anterior abdominal wall. Its upper limit extends along the seventh rib in the lower axillary region, from this point up to the fifth rib in the mid-clavicular line, down again to the articulation of the gladiolus and ensiform cartilage in the mid line, and then to the left on a level with the sixth costal cartilage, extending over about two and three-quarters inches to the left of the middle line. On the extreme right its lower border lies a little below the lower border of the ribs, about one-half an inch, and then runs to the ninth costal cartilage, then upward and to the left over the subcostal angle to the eighth left costal cartilage. A curved line with its convexity to the left, connecting the left extremity of the lower line with the left extremity of the upper, gives a fairly

good outline to its left border. Of course, the position of the liver varies in different positions of the body and under different circumstances and conditions.

With this very brief description of its outline we will take up its relations, and first of all its relation with the peritoneum, because in going over the relations of the peritoneum we will at the same time be reviewing its relations with other parts and with other organs.

The round ligament of the liver is the impervious, infantile umbilical vein, extending from the umbilicus upward and slightly backwards to a notch on the anterior border of the liver from which it passes back on the under surface of the liver through the umbilical fissure to its posterior border, where it is continued on backward and slightly upward on the posterior surface, as the impervious ductus venosus, finally terminating at the inferior vena cava, this last part of the ligament being sometimes called the ligamentum venosum. This round ligament is a very important one, not only on account of its relations to the liver, but on account of its relations to the peritoneum, because the falciform ligament of the liver extends from the sheath of the right rectus abdominis muscle backward and folds around the round ligament, or the ligamentum teres. The falciform ligament consists of twofolds of peritoneum passing around the round ligament, so that the round ligament forms its posterior border. The falciform ligament extends along the whole length of the round ligament from the umbilicus to the notch on the anterior border of the liver, then passes up and over the superior surface of the liver to its posterior portion, then upwards to the under surface of the diaphragm, running along the anterior portion of the diaphragm, and then down along the upper part of the anterior abdominal wall. If we trace the falciform ligament towards the right, we will find that it is continued on as the superior layer of the coronary ligament. There is a space, or an area, on the posterior surface of the liver which comes in direct contact with the diaphragm, which is perfectly devoid of peritoneum, and which is known as the "bare" area of the liver. Now this superior layer of the coronary ligament covers over the upper part of this bare area and extends from the liver to the back part of the diaphragm. This coronary ligament consists not only of an upper

fold of peritoneum, but of a lower as well, the lower fold being made up of a process of peritoneum coming from the under surface of the liver, passing backwards and downwards, covering the under surface of the bare area of the liver, and being attached below to the right suprarenal gland and the upper pole of the right kidney. Now, by tracing the coronary ligament to the left, we find it terminates in a triangular fold, extending from the upper surface of the liver to the under surface of the diaphragm, and which is in reality the right lateral ligament of the liver. Again, by tracing the coronary ligament towards the left, we find it again terminates in a well marked triangular fold, somewhat larger than on the right side, extending from the back part of the upper surface of the left lobe of the liver to the diaphragm and forming the left lateral ligament, so that the coronary ligament then consists of two layers — an upper and a lower — and serves to cover up the bare area in the liver.

By tracing the peritoneum along the under surface of the liver we find it passes backwards until it reaches the transverse fissure of the liver where it turns downwards, forming the anterior layer of the gastrohepatic omentum, extending from the transverse fissure of the liver to the lesser curvature of the stomach. It then passes along the anterior wall of the stomach to the greater curvature, then passes down, forming the anterior layer of the descending loop of the great omentum, then dipping upwards forming the posterior layer of the ascending limb of the great omentum. When it reaches the lower margin of the transverse colon it passes the transverse colon to its upper border, then passes back to the posterior abdominal wall forming the lower layer of the mesocolon. Beginning again at the anterior margin of the lower layer of the coronary ligament we find the peritoneum passes forward along the under surface of the liver to the transverse fissure, then passes downwards, forming the posterior layer of the gastrophepatic omentum, to the lesser curvature of the stomach. When it reaches the lesser curvature of the stomach it passes behind the posterior portion of the stomach to the greater curvature, and from this point passes downwards, forming the posterior layer of the descending loop of the great omentum, then passes upwards, forming the anterior layer of the ascending limb of the great omentum, to the lower border of the

transverse colon, then passes around in front to its upper margin, then backwards, forming the superior layer of the mesocolon.

From this account, then, it will be seen that the liver bears important relations with the greater and lesser peritoneal cavities, the greater peritoneal cavity being bounded above and behind by the peritoneum covering the under surface of the diaphragm, the upper layer of the coronary ligament, the peritoneum running along the upper surface of the liver, the anterior border of the liver, the inferior surface of the liver, the anterior surface of the lesser omentum, the anterior wall of the stomach, and the anterior layer of the great omentum. The lesser peritoneal cavity is bounded in front and above by the inferior layer of the coronary ligament, the peritoneum on the under surface of the liver, the posterior layer of the gastrohepatic omentum, the posterior wall of the stomach, and the posterior layer of the descending limb of the omentum. This is the infantile form of the great omentum, in after life, the two limbs of the omentum becoming agglutinated so that the lower portion of the cavity is obliterated, and instead of being four layers of peritoneum there are only two.

Now, in looking at the relations of the peritoneum of the liver, from the right to the left, I want to first call your attention to the ligamentum hepatoduodenale, which is the right margin of the gastrohepatic omentum containing between its two layers the hepatic artery, the common bile duct, and the portal vein, together with the hepatic plexus of nerves, some lymphatics and areolar tissue, all being enclosed in a process of Glisson's capsule, which extends downwards, all these lying between the two layers of the gastrohepatic omentum, and extending from the transverse fissure of the liver to the second or descending portion of the duodenum. Now this ligamentum hepatoduodenale not only forms the free margin of the gastrohepatic omentum, but it also forms the anterior boundary of the foramen of Winslow, the foramen of Winslow being a communication between the greater and lesser peritoneal cavities, and situated immediately below the liver, being bounded above by the peritoneum covering the quadrate lobe, behind by the peritoneum covering the inferior vena cava, and below with the beginning of the hepatic artery and

the second portion of the duodenum. So much then for the relations of the peritoneum with the liver.

The gall bladder bears important relations to the liver and are as follows: The gall bladder lies in a fossa on the under surface of the liver, by which it is attached by means of areolar tissue and vessels, so that this fossa forms its relations above. Below and at its back part it is in relation either with the second portion of the duodenum, the first portion of the duodenum, and even sometimes with the pyloric portion of the stomach. Below and in front it is in relation with the beginning of the transverse colon. The fundus of the gall bladder is entirely covered with peritoneum, and either lies just below the notch on the anterior border or else comes in direct contact with the anterior abdominal wall. Usually it touches the anterior abdominal wall about at a point corresponding with the junction of the right margin of the right rectus abdominis muscle with the ninth costal cartilage. The under surface of the left lobe presents behind a well-marked depression, the gastric impression, for the reception of the stomach, whilst just in front is a well-marked tubercle, the omental tubercle, corresponding to the omentum. The under surface of the quadrate lobe is in relation with the first portion of the duodenum and the pylorus. The under surface of the right lobe presents two well-marked depressions, the one behind for the reception of the upper pole of the right kidney and the lower part of the right suprarenal gland, the one in front receiving the sigmoid flexure of the colon, and between these two depressions is a well-marked ridge of liver substance. Near the central part of the upper surface of the liver, directly beneath the aponeurotic portion of the diaphragm, is a depression — the cardiac impression — which corresponds to the situation of the heart and the pericardium above.

Now, in regard to the blood supply, the coeliac artery arises from the abdominal aorta close to the opening in the diaphragm, and running almost horizontally forward for about one-half inch breaks up into three large branches, the hepatic, the splenic, and the gastric, these forming the coeliac axis. The hepatic runs forward and to the right, making for the upper margin of the pylorus, and in its course forming a part of the lower boundary of the foramen of Winslow. It then passes upward along the

right or free margin of the gastrohepatic omentum, accompanying the common bile duct and portal vein, and with these forming the anterior boundary of the foramen of Winslow to the transverse fissure of the liver, where it divides into a right and left branch. Its branches accompany the ramifications of the portal vein and hepatic ducts through the liver substance. In the ligamentum hepatoduodenale, the common duct lies to the right of the artery and portal vein behind.

The veins of the liver make up two distinct systems, the hepatic system and the portal system. All the blood coming from the spleen, pancreas, gall bladder, and all the intestinal tube, with the exception of the lower part of the rectum, is conveyed to the liver by the portal vein, the portal vein running up along the free margin of the lesser omentum to the transverse fissure of the liver, where it divides up into branches resembling the branches of the hepatic artery, finally terminating in the portal capillaries. From these portal capillaries, the blood enters the hepatic system of veins. The hepatic system thus arises in the substance of the liver in the capillary terminations of the portal vein and hepatic artery, forming the interlobular plexus. The hepatic artery gives off interlobular branches which run on the outer side of each lobule. From this interlobular plexus the vessels enter the lobule, converge towards its center, forming the intralobular capillaries. These intralobular capillaries empty into a single vein, which in comparison with the size of the capillaries themselves is quite large, and which extends from the apex of the lobule to the base, forming the central or intralobular vein. This intralobular vein in turn empties into a plexus of veins lying underneath the lobule, and for this reason called the "sublobular" veins. These sublobular veins communicate with the very beginning of the hepatic capillaries, these hepatic capillaries enlarging rapidly, and finally emptying into three large veins, which pass backward toward the posterior surface of the organ, and as they pass backward they converge, and finally empty into the inferior vena cava. From this account it will be seen that the hepatic veins arise in the very substance of the liver, whilst the portal veins have their origin in the spleen, pancreas, gall bladder, and greater portion of the intestinal tube, all uniting to form a single vein, the portal vein, which upon reaching the liver again

breaks up into a series of veins within the liver substance; the hepatic veins coming into direct contact with the liver substance and like the portal veins have no valves.

Because of the metastases to and from the liver as the result of malignant disease, its lymphatics are important. The lymphatic glands of the liver may be divided into five distinct groups, the hepatic, the cystic, which is really a part of the hepatic, the subpyloric, the retropyloric, and the right gastroepiploic. The hepatic group is found between the two layers of the gastrohepatic omentum, extending from the root of the hepatic artery and accompanying the hepatic artery and common bile duct to the transverse fissure of the liver. The cystic group is not really a group because it usually consists of one node, situated near the neck of the gall bladder. Occasionally there are two nodes, and once in a while three. The subpyloric group is made up of four or five glands situated just at the junction of the first and second portion of the duodenum, beneath the bifurcation of the gastroduodenal artery. The retropyloric group consists of one or two glands on the pyloric artery. The right gastroepiploic group is made up of several glands, sometimes as many as seven or eight, situated between the two layers of the greater omentum, hugging the greater curvature and taking in about the pyloric half of the stomach. All these glands empty into trunks, which for the most part accompany the veins, some running along with the portal vein, others the hepatic, some coming up from the mesentery, and some lying in close proximity to the coeliac axis, others running into trunks which accompany the inferior vena cava. The lymphatics coming from the upper surface of the liver pass upwards, perforate the diaphragm, and pass up through the anterior mediastinal space.

I am sorry, gentlemen, time will not permit me to take up the nerve supply, and, especially, of the sympathetic system. In closing, I want to say I am indebted to Drs. Kellert and Allen, of the Bender Laboratory, for the slides and specimens which I submit for your inspection and study. These slides include some beautiful sections, not only of the human liver, but of the liver of several different animals.

NOTE.—Dr Lomax's part in the Symposium consisted of a black-board talk from chalk drawings made as he went along. The above is an approximate account of what he said.

Editorial

James I said, with characteristic pedantry, that "the growth of the capital resembleth that of the head of a rickety child, in which an excessive influx of humours draweth and impoverisheth the extremities, and at the same time generateth distemper in the overloaded parts."

HAMILTON WRIGHT MABIE.

William Shakespeare, Poet, Dramatist and Man.



Heredity and Feeble-Mindedness. In the Sixty-First Annual Report of the State Institution for Feeble-Minded Children at Syracuse, N. Y., Dr. James C. Carson includes a statement of some investigations made into the hereditary conditions of the children who have been under his care.

Unfortunately, for the State, this is the last report to be made by Dr. Carson, who retires from active service after twenty-seven years as the superintendent of this institution. During these twenty-seven years his mind has been largely engaged with the study of the possibilities of training in the development of these subnormal children, and methods of instruction have been the prominent feature of his administration.

The school has been successful, and many of the children have been trained to good habits and to a moderate capacity of self-control and even of self-support; but this is largely a question of environment, and the result of the work of the institution has been to show that very few of its children are capable of maintaining themselves in the competition and rivalry of active life. They do well under the guidance of a properly managed institution. The reason for this is indicated by the natural limitations shown by this study of heredity.

When Dr. Carson assumed the office of superintendent he prepared a book, entitled "Hereditary Analysis of Applications," for the purpose of recording such facts bearing upon heredity as were to be found in the descriptive applications received for admission. Three thousand applications have been received and recorded. The defects of an inquiry of this kind are easily appreciated, and the probabilities are that the records make a better showing of family tendencies than actually exists. How-

ever that may be, the results are sufficiently discouraging, as practically fifty per cent. of the children present a record of defect in one or other of the parents, and, furthermore, three hundred and eighty of the fourteen hundred and sixty-eight cases whose parents are reported healthy came from families in which near relatives had been afflicted by convulsions, insanity, imbecility or some serious brain disease or physical deformity; and in the fifteen hundred and thirty-two applications where apparent defect was acknowledged, no fewer than four hundred and sixty-two revealed some family taints of degeneracy, besides those existing in the parents themselves. The following table of totals is presented by Dr. Carson:

Both parents healthy.....	1,468
Both parents unknown.....	314
Fathers intemperate, mothers healthy.....	354
Mothers intemperate, fathers healthy.....	37
Both parents intemperate.....	73
Fathers healthy, mothers sickly.....	114
Mothers healthy, fathers sickly.....	70
Both parents sickly.....	15
Fathers epileptic, insane, or imbecile; mothers healthy...	85
Mothers epileptic, insane, or imbecile; fathers healthy...	85
Fathers epileptic, insane, or imbecile; mothers unknown..	6
Fathers intemperate; mothers epileptic, insane, or imbecile	72
Mothers intemperate; fathers epileptic, insane, or imbecile	7
Both parents epileptic, insane, or imbecile.....	81
Fathers epileptic, insane, or imbecile; mothers sickly....	8
Mothers epileptic, insane, or imbecile; fathers sickly....	5
Fathers intemperate, mothers sickly.....	44
Mothers intemperate, fathers sickly.....	2
Fathers intemperate, mothers unknown.....	34
Mothers intemperate, fathers unknown.....	16
Fathers unknown, mothers healthy.....	11
Mothers unknown, fathers healthy.....	7
Fathers unknown, mothers sickly.....	6
Mothers unknown, fathers sickly.....	4
 Total cases	 3,000

Parents first cousins.....	56
Parents second cousins.....	18
Parents incestuous	14
Total consanguineous	88

From this it appears that of three thousand applications one thousand and eighty-eight or thirty-six and two-thirds per cent. presented a parentage free of degeneracy or some hereditary family stain. Of seventy-four applicants who were children of first or second cousins, only sixteen were from families free from defect.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—ALBANY, N. Y.

ABSTRACT: OF VITAL STATISTICS—MAY, 1912.

Deaths.

Consumption	23
Typhoid fever	0
Scarlet fever	0
Measles	0
Whooping-cough	0
Diphtheria and croup	5
Grippe	0
Diarrheal diseases	4
Pneumonia	17
Broncho-pneumonia	4
Bright's Disease	17
Apoplexy	2
Cancer	19
Accidents and violence	8
Deaths over seventy years.....	57
Deaths under one year.....	21
Total deaths	171
Death rate	20.12
Death rate less non-residents.....	17.53

Deaths in Institutions.

	Resident.	Non-Resident.
Albany Hospital	6	4
Albany Orphan Asylum	0	0
Child's Hospital	0	0
Albany County Jail	1	0
County House	1	1
Home for the Friendless.	0	0
Homeopathic Hospital	0	0
Hospital for Incurables	1	2
House of Good Shepherd.	0	0
Little Sisters of the Poor.	1	0
Public Places	1	3
Penitentiary	0	0
St. Margaret's House	0	4
St. Peter's Hospital	7	4
St. Vincent's Female Asylum	1	0
Austin Maternity Hospital	1	0
Albany Hospital, Tuberculosis Pavilion.	3	3
Labor Pavilion	0	0
Total	23	21
Births	153	
Still births	7	
Premature births	6	

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	3
Scarlet fever	2
Diphtheria and croup	22
Chickenpox	7
Measles	56
Whooping-cough	0
Consumption	46
Total	136

Contagious Disease in Relation to Public Schools.

	Reported. D.	Reported. S.F.	Deaths D.	Deaths S.F.
Public School No. 6. . . . .	..	1	..	..
Public School No. 8.	2	..	..	..
Public School No. 17.	2	..	..	..
Public School No. 20.	3	..	1	..
St. Joseph's Academy . . . . .	..	1	..	..

Number of days quarantine for diphtheria:

Longest....	59	Shortest....	5	Average....	14 9-20
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Number of days quarantine for scarlet fever:

Longest....	35	Shortest....	30	Average....	32 1-2
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Fumigations:

Houses.....	54	Rooms.....	247
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Cases of diphtheria reported	22
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Cases of diphtheria in which antitoxin was used.....	22
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Cases of diphtheria in which antitoxin was not used.....	0
--	-------	---

Deaths after use of antitoxin.....	5
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BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	17
Negative	36
Failed	0
Total	53

TUBERCULOSIS.

Living cases on record May 1, 1912.....	369
Cases reported during May.....	..
By card	41
Death cases by certificate.....	8
	—
	49
	—
	418

Dead cases previously reported.....	15
Dead cases not previously reported.....	8
Duplicates	1
Lost of track of	1
Recovered	0
Removed	2
	—
	27
Living cases on record June 1, 1912.....	391

Total tuberculosis death certificates filed during May..... 23

Out of town cases dying in Albany:

Albany Hospital	1
Albany Hospital Camp	3
Labor Pavilion	0
	—
	4

Net city tuberculosis deaths..... 19

Report of Visiting Tuberculosis Nurse.

Total number of cases investigated.....	52
Dead cases	8
Left city	7
Cases cured	8
At Albany Hospital Camp.....	4
Not located	6
Dispensary patients	13
Declined services	6
	—
	52

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	14
Initial negative	107
Release positive	5
Release negative	60
Failed	15
	—
Total	221
Test of sputum for tuberculosis:	
Initial positive	21
Initial negative	40
Failed	2
	—
Total	63

BUREAU OF MARKETS AND MILK.

Market reinspections	129
Public market inspections	25
Fish market inspections	3
Fish peddler inspections	4
Pork packing house inspections.....	3
Rendering establishment inspections	1
Slaughter house inspections	5
Milk inspections	4
Butter fats below 3%.....	0
Butter fats from 3 to 3.5%.....	0
Butter fats from 3.5 to 4%.....	4
Solids under 12%	0
Solids from 12 to 12.5%.....	1
Solids from 12.5 to 13%.....	2
Solids over 13%	1

MISCELLANEOUS.

Mercantile certificates issued to children.....	27
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Number of written complaints of nuisances.....	96
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Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—STATISTICS FOR MAY, 1912—Number of new cases, 171; classified as follows: Dispensary patients receiving home care, 11; district cases reported by health physicians, 11; charity cases reported by other physicians, 37; moderate income patients, 94; metropolitan patients, 18; old cases still under treatment, 93; total number of cases under nursing care during month, 264. Classification of diseases for the new cases: Medical, 32; surgical, 7; gynecological, 4; obstetrical under professional care, mothers 56, infants 57; eye and ear, 0; skin, 1; throat and nose, 1; dental, 0; infectious diseases in the medical list, 13; infectious diseases in the surgical list, 0. Disposition: Removed to hospitals, 3; deaths, 12; discharged cured, 128; improved, 13; unimproved, 22; number of patients still remaining under care, 86.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 1; nurses in attendance, 2; patients carried over from last month, 0; new patients during month, 2; patients discharged, 0; visits by head obstetrician, 0; visits by the attending obstetrician, 0; visits by students, 0; visits by nurses, 0; total number of visits for this department, 6.

Visits of Nurses (all departments).—Number of visits with nursing treatment, 1,387; for professional supervision of convalescents, 683; total number of visits, 2,070; cases reported to the Guild by four health physicians and fifty other physicians; graduate nurses 9, and pupil nurses 6 on duty.

Dispensary Report.—Number of clinics held, 88; new patients, 132; old patients, 283; total number of patients treated during month, 415. Classification of clinics held: Surgical, 13; nose and throat, 5; eye and ear, 20; skin and genito-urinary, 4; medical, 11; lung, 12; dental, 4; nervous, 1; stomach, 0; children, 12; gynecological, 6.

REGISTRATION RESCINDED.—The Board of Regents, at a meeting held recently, rescinded the registration of the Eclectic Medical College of the City of New York and of the New York Medical College and Hospital for Women; the action becomes operative July 1. This is equivalent to withdrawal of recognition from the institutions named.

ALUMNI OF THE ALBANY MEDICAL COLLEGE.—A meeting of the Alumni of the Albany Medical College attending the sessions of the American Medical Association at Atlantic City was held at the Marlborough-Blenheim on Tuesday afternoon, June 4, 1912, at 5 P. M.

Old memories were reviewed and a general good time had.

Among the Alumni attending the sessions of the Association were: Prof. Andrew MacFarlane; Prof. Leo H. Neuman; Prof. E. A. Vander Veer; Dr. Fred C. Conway; Dr. Van Allen, of Springfield, Mass.; Dr. Crothers, of Hartford, Conn.; Dr. Fairchild, of Des Moines, Iowa; Dr. Arthur Holding; Dr. Newton, of Northampton, Mass.; Dr. Miller, of Hartford, Conn.; Dr. Beebe, of Johnstown, N. Y.; Dr. LeRoy, of Pleasant Valley; Dr. William G. Lewis; Dr. Keller, '96; Dr. James N. Vander Veer! Dr. Charles Prest, Waterford, N. Y.; Dr. G. L. Ullman; Dr. Arthur J. Bedell.

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.—The Third Clinical Congress of Surgeons of North America will be held in New York City the week of November 11 to 16, 1912.

ALIEN INSANE COSTLY.—The Committee on Mental Hygiene of the State Charities Aid Association, among other organizations, is advocating the passage of the public health measures in the Dillingham Immigration Bill, now before Congress. The Association especially favors placing a United States government physician on all boats carrying immigrants. It is believed that this physician will be able to obtain necessary information on the mental and physical condition of arriving immigrants that cannot possibly be obtained in any brief examination after arrival in this country.

There are 8,000 aliens in the insane hospitals in this State. It must be remembered that these are aliens and not merely foreign born citizens. They are public burdens largely because of ineffective physical and mental examinations on their arrival and because deportation procedure is so involved that successful efforts in this direction are comparatively rare.

The maintenance of these aliens is costing the tax payers of New York State more than \$2,000,000. Friends of the Dillingham Bill maintain that Congress could and should relieve the State of this burden. At least the alarming increase of the foreign born insane in the State hospitals could be stopped.

The steamship companies have a powerful lobby against the bill and are much opposed to it. Friends of the bill, however, say that this is one of the strongest reasons why it should pass. Fear of antagonizing the

foreign vote is also influencing some congressmen. Tax payers, generally, and the labor unions are in favor of it and it is believed that representatives of the rural districts and large labor centers will vote for it. The bill has already passed the Senate and the responsibility is on the House.

DANGERS OF SPITTING.—"Ninety-five per cent of our consumption," says the North Carolina Board of Health, "come from careless spitting, coughing and sneezing," particularly on the part of the consumptive, but also from people who are apparently healthy. "Spit is frequently laden with deadly disease germs, particularly that of consumptives.

"When one coughs, spits or sneezes a great multitude of tiny drops of spittle are violently expelled from the mouth and nose. The largest of these drops can be readily seen. A large number of smaller droplets can be found if a mirror or piece of glass is held before the face when coughing or sneezing. A tremendous quantity of still smaller droplets are discharged in the form of an invisible spray or mist, which floats about in the air for some time. Scientists have found that when a man coughs, spits or sneezes in a large hall or room where the air is quiet, these tiny, invisible germ-laden droplets will float in the air for a distance of 25 to 100 feet. These tiny droplets, in the form of mists or spray, may be breathed in by other people, or they may settle on objects with which they come into intimate contact, such as food and clothing. Viewed in this light, such conduct is at least impolite. Furthermore, coughing, sneezing and spitting germ-laden matter into their faces even if it is invisible and in the form of fine mist is dangerous to the public at large.

AMERICAN THERAPEUTIC SOCIETY.—The thirteenth annual meeting of the Therapeutic Society was held at Montreal, Canada, May 31st and June 1, 1912. Dr. Alexander D. Blackader, Montreal, Canada, president, read his address. The following papers were read: "The Treatment of Somatic Death," Dr. W. Wayne Babcock, Philadelphia, Pa.; "Common Types of Thyroid Hypo-secretion," Dr. Oliver T. Osborne, New Haven, Conn.; "Notes on the Differentiation of Cardiac Arrhythmias and their Treatment with a New Time Marker," Thomas E. Satterthwaite, New York City; "Some Fundamental Principles in Digitalis Therapy," Dr. Henry Beates, Jr., Philadelphia, Pa.; "Action of Therapeutic Doses of Aconite," Dr. R. Dawson Rudolph, Toronto, Can.; "The Relation between High Blood Pressure and the Internal Secretions," Dr. E. deM. Sajous, Philadelphia, Pa.; "High Blood Pressure due to Renal and Cardiac Changes," A. C. Crofton, Chicago, Ill.; "High Blood Pressure of Alimentary Auto-Toxic and Metabolic Origin," M. Howard Fussell, Philadelphia, Pa.; "High Blood Pressure due to the action of Exogenous Poisons; such as Tobacco, Caffein, Alcohol, etc." H. C. Wood, Jr., Philadelphia, Pa.; "High Blood Pressure Arising from Nervous Strain," Dr. Edward D. Fisher, New York City; "High Blood Pressure in the Toxemia of Pregnancy," Dr. D. J. Evans, Montreal, Can.; "Some of the Factors which Alter Blood Pressure in Pulmonary Tuberculosis," Dr. F. M. Pottinger, Los Angeles, Can.; "The General Treatment of High Blood Pressure."

Dr. Spencer L. Dawes, Albany, N. Y.; "Treatment by Manual Methods, Regulated Movements, and Neutral Immersion Baths," Dr. J. Madison Taylor, Philadelphia, Pa.; "Treatment by High Frequency Currents and other Forms of Electricity," Dr. Howard Van Rensselaer, Albany, N. Y.; "Sodium Nitrate in Arterial Hypertension," Dr. William H. Porter, New York City; "The Proper Dietetic Treatment of Diabetes Mellitus," Dr. Louis H. Kolipinski, Washington, D. C.; "Modern Methods of Drug Standardization," Dr. F. E. Stewart, Philadelphia, Pa.; "Sacro-iliac Relaxation as a Sequel to Surgical Operations," Dr. A. E. Gallant, New York City; "Enterostomy and Post Operative Ileus," Dr. L. H. Taylor, Washington, D. C.; "Medical Treatment of Gastric and Duodenal Ulcer," Dr. Louis M. Gompertz, New Haven, Conn.; "A Note on the Treatment of Gastric Neurosis," Dr. Reynold W. Wilcox, New York City; "'Filariasis' Report of a case treated with Dioxydiamino-arsenobenzol," Dr. Noble P. Barnes, Washington, D. C.; "Dioxydiamino-Arsenobenzol in the Treatment of Various Clinical Forms of Syphilis," Dr. J. M. Anders, Philadelphia, Pa.

FACULTY APPOINTMENTS.—At the meeting of the Faculty of the Albany Medical College, May 10th, the announcement was made of the appointments of Professor Henry Bernstein, at present director of Bender Laboratory as professor of Pathology and Bacteriology, vice Dr. Thomas Ordway resigned, and Professor R. W. Keeton, of the University of Illinois, as adjunct instructor in Experimental Physiology and Physiologic Chemistry.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The semi-annual meeting of the Medical Society of the County of Schenectady was held at Newman's Lake House, Saratoga Lake, Tuesday, June 18, 1912. Dr. F. C. Reed presented a paper on "The Use of the Curette."

PERSONALS.—Dr. L. A. FRAZIER (A. M. C. '81), who is about to retire from active practice and move to Mechanicville, is to be given a farewell dinner by the Amsterdam City Medical Society.

—Dr. PERCIVAL W. HARRIG (A. M. C. '06), has returned from abroad.

—Dr. WALTER T. DIVER (A. M. C. '07), of Troy, N. Y., has returned from Europe.

—Dr. J. E. MALONEY (A. M. C. '07), Ravana, N. Y., has been elected a member of the Board of Education for three years beginning July 1, 1912. On June 1st he became surgeon for the New York Central & Hudson River Railroad Company.

—Dr. RAY W. EATON (A. M. C. '11), is engaged in active practice at North Adams, Mass.

DIED—Dr. JOHN W. JOHNSTON (A. M. C. '66), for forty-eight years a practitioner of Blair county, president of the First National Bank of Claysburg, Pa., died in that city May 8th, aged 69.

—Dr. PIERCE J. O'BRIEN (A. M. C. '98), died at his home in Troy, N. Y., May 25th.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Case Histories in Medicine, Illustrating the Diagnosis, Prognosis and Treatment of Disease. By RICHARD C. CABOT, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Second edition, revised and enlarged. Plate II, pages 295. Boston, W. M. Leonard, Publisher, 1911.

As indicated in the title this book presents case histories, one hundred in all, and takes up, in the form of questions and answers, the causes of such symptoms and signs, and the additional data necessary for a diagnosis. The diagnosis, prognosis and treatment is also forcibly discussed and in a detailed manner.

The last chapter is devoted to notes on drug therapy; the present outlook in light of modern so-called pure chemical therapy Cabot believes to be bright. He discusses "placebos" and the homeopathic principle and modern dosage. A list is given of the drugs actually used at the Massachusetts General Hospital at the present time.

Such books on case teaching are of great practical value in helping to train medical students to think, to force them to take the active rather than the receptive mood. This indeed is one of the advantages of all forms of case teaching contrasted with the usual text-books and didactic lectures. For the same reason it should be useful to practitioners, as a "self quiz," or as part of a course of graduate instruction.

T. O.

Differential Diagnosis. Presented through an analysis of 385 cases. By RICHARD C. CABOT, M. D., Assistant Professor of Clinical Medicine, Harvard University Medical School, Boston. Second edition, revised. Fig. 195. pages 764. Philadelphia and London, W. B. Saunders Co., 1912.

The first edition was fully reviewed in the ANNALS for August, 1911, pages 495-497, and as then predicted the book has had a large sale necessitating three reprintings of this first edition and a second edition within a year. In this edition the index and table of contents have been reorganized and two new cases have been introduced. In the preface it is announced that some of the symptoms not treated in the volume (*e. g.*, hematuria, edema, diarrhoea, dyspepsia, glandular enlargement, etc.), will be dealt with in a second volume along the same lines.

The book is very interesting, the style is "breezy" and attracts attention, and although we may not agree with many of the more or less dogmatic statements, it may help to raise the general standard of diagnosis. The impression is given, however, of a finality which is not con-

due to a spirit of investigation and does not lead the practitioner to seek for new or unusual data and thus advance our knowledge of clinical medicine. There is much, however, that is helpful in this book of Dr. Cabot's, and it may be highly recommended to students and practitioners as a "self quiz" to supplement but not supplant the more arduous and older method of studying pathological findings in their relation to clinical data.

T. O.

Veterinary Bacteriology. By ROBERT E. BUCHANAN, Ph. D., Professor of Bacteriology in the Iowa State College of Agriculture and Mechanic Arts, Division of Veterinary Medicine. Octavo of 516 pages, with 214 illustrations. Philadelphia and London, W. B. Saunders Company, 1911. Cloth, \$3.

This book represents a revision of the lectures on veterinary bacteriology given to classes in the Division of Veterinary Medicine in the Iowa State College. As the author says, "The book is not intended to serve as a manual of laboratory practice, hence detailed discussion of methods and technic has been omitted. Several organisms causing diseases of man not transmitted to lower animals have been included. In all cases they are closely related to organisms having significance to the veterinarian, they cause diseases which are commonly confused with somewhat similar diseases of lower animals, or they are valuable as illustrations of methods of immunization, treatment, or diagnosis."

Among mistakes which will doubtless be corrected in another edition, it is stated on page 416 that amoeba meleagridis has been shown to be but a developmental stage in the life cycle of a coccidium. Although this claim has been made, the best evidence, however, favors the belief of Dr. T. Smith that the amoeba meleagridis is the cause of a certain disease of turkeys and fowls.

As the relation of disease of man and animals is more clearly seen and appreciated, and the courses in bacteriology in medical schools are extended by including work in comparative pathology, this book should be of value to the student of medicine as well as to the veterinarian, for it discusses many infections in animals which are closely related to human disease and which are not usually taken up in the text-books for medical students.

T. O.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, etc., by leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, A. M., M. D., Philadelphia. The price of this book is \$2. Vol. I, Twenty-second Series, 1912. J. B. Lippincott Company, Philadelphia and London.

The leading article of this volume entitled "Methods of determining the source of pus and shreds in the urine, with special reference to the

author's 'fine-glass Catheter test,'" by Abr. L. Wolbarst, M. D., is an exhaustive one on the macroscopic appearance of urine depending upon the particular portion of the tract involved. The diagrammatic illustrations are clever and helpful.

"Venereal Disease in the United States Navy—Its Prevention and Treatment," by Surgeon J. S. Taylor, U. S. N. To all who are interested in Uncle Sam's boys ashore and afloat this essay will be illuminating as to the morals of the men, the inroads of venereal disease and the safeguards placed around their health by precept and prophylactic agents, such as calomel ointment and silver nitrate solution.

"The Science and Practice of Eugenics or Race-culture," by Meyer Solomon, M. D., is an ambitious thesis on a live subject treated with much painstaking research and thoroughness, illustrated by several charts and diagrams. Students of Darwin and his theories would do well to read the paper.

This being the "First Volume" of the year considerable space as usual is given to a review of "Progress of Medicine during 1911," by A. A. Stevens, M. D., and others. In it we read "1911, while recording some advance, seems to have spent most of its energies in the improvement and perfecting of previous inventions and discoveries." Consequently there is nothing of great practical interest in this section to which the reviewer would call attention.

Perhaps the most helpful article in the volume is one by James J. Walsh, M. D., entitled "The Masks of Diabetes," the author treats the subject under the following heads. Skin Lesions. Neuritis. Soreness of the Gums. Rectal Irritation. Irritation of the External Genital Organs. Muscular Cramps. Tuberculosis and Nephritis, any of which may act as a mask to the underlying glycosuria which may escape detection unless a routine urinalysis is made in all cases.

H. D. C.

OBSTETRICS

Edited by James P. Boyd, M. D.

The Retraction Ring as a Cause of Obstruction in Labour.

ROBERT JARDINE. *Journal of Obstetrics and Gynecology of the British Empire*, Vol. XX., No. 1, July, 1911.

In an obstructed labor, when the retraction ring can be palpated through the abdominal wall, rupture of the uterus must be considered possible. Adequate treatment must be instituted to prevent the accident; if improper treatment is adopted, the rupture may be caused by it.

While the writer is of the opinion that the ring commonly complicates the labor obstructed from other causes, there are cases in which the persistent contraction of the ring, either in front of or behind the presenting part, constitutes the primary cause of obstruction. To a consideration of the latter cases the writer's remarks are confined.

(a) Cases where the ring forms in front of the presenting part. Two cases are recorded and each presented a moderate degree of pelvic contraction; in one the membranes ruptured early, in the other at the end of labor. In each case, morphia failed to relax the spasm and Caesarean section, with favorable outcome for mother and child, was done.

In obstructed labor, it is not difficult to explain the presence of the ring as due to "excessive retraction of the main body of the uterus and thinning-out of the lower uterine segment"; a firm, thickened ledge marks the division between the two uterine segments.

When there is no other cause of obstruction to labor, tonic contraction of the ring may result from the irritant effect of dilating bags, the use of ergot during the first and second stages of labor or from 'spasmodic condition of the os' during the first stage.

Diagnosis is most satisfactorily made by vaginal examination detecting the thinned, dilated lower uterine segment and above it the band, becoming firm rather than relaxing with the pains, running about the whole or part of the uterine cavity. The band may or may not be detected through the abdominal wall.

To assure a favorable outcome for mother and child, diagnosis should be made before exhaustion has set in. The treatment suggested is the use of morphia to relax the spasm of the ring, supplemented by surgical anaesthesia with manual dilatation, when forceps may be applied to complete the delivery. There are mentioned Caesarean section if the child is living and craniotomy, possibly with section of the shoulder-girdle, if the child is dead. Incision of the ring and the use of dilating bags are not recommended because of the high position of the obstruction.

(b) Cases in which the ring forms above the presenting part. The condition generally arises in labors obstructed from other causes, for example deformed pelvis and tumors. The ring occasionally is the primary cause of obstruction; with such cases the author deals.

When the ring forms about the neck, the head presenting, the essential dangers are rupture of the uterus from ineffectual attempts at artificial delivery, exhaustion of mother and child from failure in efforts at spontaneous labor, and infection. In these cases the membranes as a rule rupture early; with the escape of fluid the uterus becomes moulded about the child before the cervix dilates.

Often positive diagnosis can be made only by passing the hand beyond the head when the cause of obstruction is detected; abdominal palpation may or may not reveal the presence of the ring.

The prognosis for mother and child is grave.

Under "full doses of an opiate," forceps are to be applied. Manual dilatation of the ring may aid in making possible delivery by this means. Operative procedures similar to those mentioned in the ring-in-front cases may be employed. Version is contra-indicated.

The writer believes the retraction ring to be the true cause of impeded breech cases with legs extended. Here the membranes rupture early, the uterus moulding itself about the child's body and grasping legs and feet

tightly. The ring forms inside of the uterus making its detection through the abdominal wall often difficult or impossible.

The prognosis in these cases is but little less favorable for mother and child than in ordinary breech cases.

Under anaesthesia the extended leg is swept inward and downward over the child's abdomen, delivery being accomplished by traction upon the leg rather than at the groin. The thinned, lower uterine segment with danger of rupture must be borne in mind and care taken to keep the head well flexed and the arms from becoming extended.

The writer's observations are offered in the hope that more attention will be paid to the subject of the retraction ring as a cause of obstruction in labor; a subject which hitherto has not received the attention it deserves.'

P. T. H.

A New Device for the Hydrostatic Dilatation of the Cervix.

R. L. JOHN. *The Therapeutic Gazette, Series 3, Vol 27, No. 10, October 15, 1911.*

Dilatation of the cervical canal by water pressure is a most valuable procedure when, in the interests of both mother and child, it is desired to induce labor prematurely.

The history of the evolution of the hydrostatic dilator is interesting. The crude animal bladders inserted into the cervix in 1831 by Von Schnakenberg were soon employed as vaginal dilators. Later Karl Braun introduced the forerunner of the modern hydrostatic dilator; a vulcanized rubber bag that could be filled with fluid after being inserted into the vagina (or the uterus.) Tarnier in 1862 introduced into the lower uterine segment a rubber bag the presence of which was designed to institute uterine contractions. The same year Barnes produced the well-known fiddle-shape bag, the purpose of which was to act directly upon and dilate the cervix. This instrument is still in use in Great Britain. In 1888 Champetier de Ribes produced a large, elongated, inelastic, cone dilator with a capacity of seventeen ounces. After stimulating uterine contractions from its presence in the lower uterine segment, the cervix was to be dilated by passage of the bag through it. The Voorhees Bag of 1900, being approximately an equilateral triangle in cross-section, was designed to overcome the great objection to its predecessor (namely the displacement upward of the foetus) and is now in quite general use in the United States. In 1906 the Pomeroy Bag, which is a combination of a Voorhees Bag and one of the shape of the dilated birth-canal, was introduced. The vagina however rarely needs dilatation and the presence of the clumsy bag in the lower tract for any considerable time has been found to be most painful.

Designed to remedy the defects of the earlier dilators, the Dr. Barton Cooke Hirst Bags have recently been brought forward. These bags, made of strong, inelastic rubber tissue, are of a "modified hour-glass shape when distended, looking like nothing so much as the ball of a diabolo

set." They are made in three sizes, the narrow central neck being one, two or three inches in diameter and the expanded bases one inch larger than the neck in each size. The length when distended is two inches for all sizes, that being sufficient to include and project slightly beyond the usual cervix. The tube by which the bag is filled leads off from the center of one base. The bag is inserted with one base just inside the internal os and the other just external to the external os.

By filling the bag with sterile water from a bottle which is connected with a graduated mercury manometer, definite pressure within the bag at any time may be known and may be increased or diminished as dilatation progresses.

Since pressure is exerted in the most favorable direction to dilate and obliterate the cervix and may be perfectly regulated and controlled, the Hirst Bag surely possesses an important feature not found in the other dilators. It is claimed that the bag cannot slip out of place, does not displace the presenting part and that the dilatation produced is not transitory; that it causes the patient no pain in a way 'defeats one of its purposes namely to start or increase labor pains.'

The author cites seven cases in which the Hirst Bag was used:

1. Primip. 22. prolonged labor, cervix obliterated but undilated, manual dilatation up to 1½ in., 2 in. Hirst at 100 mm for 10 min., fully dilated, forceps.
2. Primip. 22. ten days over term, cervix unobliterated and undilated, instrumental dilatation, 2 in. Hirst at 150 mm for 2 hours, spont.
4. Primip. 32. therapeutic abortion (—3 weeks), cervix undilated, unobliterated, instrumental dilatation, 2 in. Hirst at 180 mm for 2½ hours, pains in 48 hours. spontaneous.
5. Multip. 18.3 in. dilatation, 3 in. Hirst at 150 mm for 30 minutes, forceps.
6. Multip. 26. breech at term, 2 in. Hirst at 150 mm for 2 hours, no pains for 48 hours, out of bed and spontaneous delivery in 24 hours.
7. Multip. 36. term, early prolonged labor, instrumental dilatation, 2 in. Hirst at 180 mm for 11 hours, with two bougies, 3 in. Hirst at 180 mm for 2¾ hours. forceps.

Placenta Previa. A Study of 10,600 Cases.

ELICE McDONALD. *Surgery, Gynecology and Obstetrics*, Vol. XII., No. 6, June, 1911.

Since 1877 and the advent of improved surgical technique, the maternal mortality in placenta previa has fallen from 23.6% to 7.72%; during the same time, the infant mortality has decreased but little, namely from 63.1% to 54%. Complete placenta previa, though the mortality is three times as great, occurs but one-fourth as frequently as the other varieties.

The lower uterine and cervical mucosa is less active in decidua formation than that in the higher regions of the uterine cavity. The placenta

therefore not only spreads over an increased surface but the villi burrow deeper into the thinned muscle wall, impairing the contractility of the latter and at the same time making it more friable and so more readily torn.

The grave dangers therefore are hemorrhage and laceration. Post-partum hemorrhage occurs in 12% of the cases, coming on usually at an interval after birth of the child when the temporary fall in blood pressure following delivery has been recovered from. Laceration results commonly from methods employed in delivery; from the nature of the muscle wall, it is usually extensive. If the cervical vessels are torn across, the hemorrhage may be profuse since they do not pass through contractile tissues which would tend spontaneously to control bleeding.

The symptoms are fairly constant. Commonly there is a dribbling of blood in the later months without pain or straining. The first bleeding usually is not severe and terminates spontaneously. If the cervix is dilated, the physical signs are obvious; if undilated, a cushion may be made out between the examining finger and the thinned uterine wall and the presenting part. The frequent association of the condition with malposition and multiple pregnancy should be borne in mind.

The essentials of treatment are control of hemorrhage and delivery of the child without injury to the maternal soft parts, with as little natural straining as is possible and, unless the patient can be under constant observation, without delay.

In complete placenta previa with dilated cervix, version and immediate extraction are indicated. When the cervix is undilated, other procedures may be employed. If the child is dead or premature, version and delayed extraction are advised in the interests of the mother. If the child is alive, the intra-ovular use of the large elastic bag (10-12 cm. in diameter) offers by far the best chance for the child and, unless haste in delivery is indicated, is advised. The use of cervical gauze and the employment of manual or instrumental dilatation are less satisfactory. Caesarean section may save a few more premature infants but it must be borne in mind that the patient may have suffered from earlier loss of blood, may have been frequently examined and after delivery may suffer from a severe post-partum hemorrhage and, therefore, is a poor surgical risk.

In incomplete placenta previa, the greater possibility of securing a living child should be considered in determining treatment. In relatively high locations of the placenta and with few symptoms, rupture of the membranes may suffice to bring down the presenting part and stop the bleeding. In the moderate degrees, the use of the elastic bag as described meets the conditions by controlling the hemorrhage and bringing about gradual dilatation of the cervix.

Because of the dangers of post-partum hemorrhage, the uterus should be packed at once or preparations made to carry out the procedure without delay if necessary.

The late dangers are sterility and miscarriage in future pregnancies.

P. T. H.

ALBANY MEDICAL ANNALS

Original Communications

THE MINERAL SPRINGS OF SARATOGA.

Read before the Medical Society of the State of New York, April 18, 1912.

BY GEORGE HAUGHTON FISH, M. D.,
Saratoga Springs, N. Y.

The wonder and interest of the mineral springs at Saratoga and the reputation they have enjoyed for so many decades as health restoring fountains, has been greatly stimulated in the past three years by reason of their purchase by the State of New York and the establishment of a State Reservation at Saratoga. During the last three years the therapeutic value of some of the older springs greatly suffered by reason of the prolonged and continued pumping of the waters for the purpose of extracting their carbonic acid gas and selling it, allowing the waters to go to waste. Happily, since the acquisition of these spring properties by the State and the cessation of pumping, the springs, which had in a measure deteriorated, have been restored to their former strength both in mineral constituents and carbonic acid gas, so that they now flow with all their old vigor and may be prescribed with the knowledge that therapeutic results will be constant; while a few new springs have been discovered possessing therapeutic properties equal to those of the older and more famous waters.

Saratoga is fortunate in possessing many springs of more varied constituents than any other known Spa, and all these within a radius of three or four miles. From a therapeutic viewpoint the waters may be divided into five classes: Alkaline, Saline Cathartic, Chalybeate, Sulfurous and Alterative.

The Alkaline waters are particularly valuable for patients who suffer from the so-called uric acid diathesis, hyperacidity of the stomach, rheumatic and gouty conditions. The unvary-

ing alkalinity of the blood after ingestion of these waters is the most striking proof of the diffusive power of the alkaline salts which they contain, and which is very great; their absorption taking place soon after ingestion. They stimulate the alkaline secretions of the liver, pancreas and intestinal glands, and, taken on an empty stomach, stimulate the flow of gastric juice but diminish its acidity.

The alkaline waters are valuable in catarrhal conditions because they increase the flow of alkaline mucous. As a vehicle for the administration of certain drugs, particularly the iodides, these waters excel anything I have ever used. Extremely large doses of iodides may be administered, dissolved in one of these waters, with no gastric disturbance following.

The Saline Cathartic waters of which, the most widely known are the Congress, Hathorn and Coesa, formerly the Carlsbad, are of great value, not only as purgatives, but in conditions of torpid liver, and properly administered, as gentle laxatives. They stimulate the intestinal and biliary secretions and excite peristalsis. One great advantage obtained by the judicious use of these waters, instead of the various laxatives and cathartics, is the absence of any irritating effect upon the gastric or intestinal mucosa.

In this regard they also excel the foreign cathartic waters, which depend for their action upon the sulfates which they contain, and which if long continued set up inflammation of the alimentary tract while the Saratoga Saline waters depend more on the large amount of chlorides and the bicarbonates which they contain, and may be administered for long periods of time without fear of such consequences. These waters also have a diuretic action and for this purpose are best prescribed in small quantities, frequently repeated.

The more or less prevalent belief that the only value of these cathartic waters consists in evacuating the bowels comes far from doing justice to their therapeutic merit. In addition to the purely laxative or cathartic action, these alkaline-salines exert a true tonic effect upon the mucosa and blood and so upon the whole economy, aiding in the eliminating of effete products, by other emunctories besides the bowel, and promoting metabolism by their influence on the capillary circulation and lymph streams.

and their stimulation or depression of the secreting membranes and glandular structures.

The chalybeate waters are, without doubt, of very great value in anaemia and chlorosis, in fact whenever an iron tonic is indicated. The small amount of iron contained in these waters has made many skeptical as to their therapeutic value, but observation of a few test cases by any clinician would convince the most skeptical as to their value. I quote from five tests cases made by the late Dr. Thomas Burchard and published in his able essay on "The Saratoga Mineral Waters." Two patients were selected as representing perfect health; the other three, one male and two females, suffering from severe anaemia. One glass of the mineral water was prescribed four times daily, the Columbian water being selected for the test. The two patients representing health were obliged to discontinue the use of the water after one week's use on account of severe headaches it produced. In one case accompanied by epistaxis. In the three patients suffering from anaemia, sphygmographic tracings showed increase of the power and rhythm of the heart beats and microscopic examination in each case showed an increase in the number of red corpuscles and favorable change in their character.

The mere presence of iron in a natural water is no evidence of its medicinal usefulness, but in the ferruginous waters of Saratoga Springs the iron exists in such chemical combination and together with the natural carbonic acid gas as to be of much greater value therapeutically than many times the amount of iron administered in other form.

There are several so-called sulphur springs located at Saratoga, the waters of which are impregnated with sulphuretted hydrogen. Their value particularly for bathing in certain skin diseases has been long established. Taken internally they produce some alterative effects, and are so used in skin diseases and so-called scrofulous conditions.

The alterative waters are also to a mild extent saline cathartic, they stimulate the glandular secretions of the liver and intestines, aid in dissolving renal and hepatic calculi and exert a diuretic action and seem to promote general metabolism and aid in the excretion of effete products. These waters have proved of particular advantage in the treatment of diabetes, nephritis,

eczema, rheumatism and rachitis in children and many wasting diseases where glandular secretions are sluggish and an alterative effect is desired.

The great value of all the mineral waters of Saratoga Springs lies, not so much in the quantity of their different ingredients, as it does in the particular combination in which nature presents them to us. The presence, also, of natural carbonic acid gas in such large quantities adds much to their potency. This gas being particularly effective in certain gastric conditions, acting as a stimulant to an atonic gastric mucous membrane, and, as an anaesthetic to an irritable one. It also exerts some stimulating effect after absorption into the blood stream.

It should be borne in mind by the layman, as well as the physician, that these mineral waters are medicinal agents capable of producing ill results as well as beneficial if injudiciously used, and that they should only be used upon the advice of a physician. The practice, so often followed by many, of visiting Saratoga Springs, and indulging freely in the waters indiscriminately and without medical advice should be condemned, and I have frequently seen patients made ill simply by this reckless use of the mineral waters. In making an arbitrary classification of the waters, it is done with a full realization that no hard and fast line may be drawn, as many of the alkaline waters are also saline, most of the saline, alterative as are also the sulphur waters. Patients suffering from certain morbid conditions, such as extensive arterial degeneration, plethora and haemophilia, should avoid the iron waters, while those afflicted with acute inflammatory conditions of the stomach or intestines and pyloric obstruction should not employ the saline mineral waters.

As is well known, the benefit to be derived from the use of any natural mineral water is greatly enhanced by the patient sojourning near the location of the spring for a few weeks at least and taking what is termed "the cure." The complete change of surroundings, absence of the cares of business and domestic life, the beneficial effect, in the case of Saratoga, of the bracing atmosphere and unexcelled climate, the use of a judicious dietary, combined with proper rest, exercise, recreation and bathing, all combined with the drinking of the waters as

carefully prescribed by a physician—all these are factors which aid in ridding a patient of his disease.

Several of the springs of Saratoga have bath houses on their grounds where patients may enjoy the benefit of a bath in natural mineral water, highly impregnated with carbonic acid gas. The therapeutic value of these baths, the stimulating and beneficial effect of the external application of carbonic acid gas, in this way, is recognized and employed to a much greater extent abroad than here; but, with the advantages and facilities to be obtained in our own country, there is no need for so great an annual pilgrimage to the foreign Spas were Saratoga Springs only more generally appreciated by the practitioner of medicine as well as the layman. One of the bath houses in Saratoga Springs is ranked as the equal of any in this country, and here are facilities not only for mineral baths, but also Turkish, Russian and Swedish baths, as well as competent scientific massage treatment and the application of electro-therapy. The bathing feature at Saratoga has never received the attention from the medical fraternity which it deserves. In the sulphur and other waters we have very powerful remedial agents when applied in the form of bath, which are surprisingly effective in specific and skin disease and in rheumatic and allied conditions. The exhilaration experienced after a bath in these mineral waters, so highly charged by CO₂ must be felt to be fully appreciated, but its tonic effect in neurotic and neurasthenic patients and those suffering from fatigue from overwork, etc., is very gratifying to both physician and patient.

In specific skin disease the effect of the baths in these Saratoga waters is superior to that obtained at Hot Springs, and many are the cases of rheumatism, which, after various sojourns at the other famous spas, have been greatly benefited by the combined use of these waters internally and for bathing.

Since the establishment of a State Reservation at Saratoga several beautiful and extensive public parks, in which are located some of the mineral springs, have been laid out or acquired by the state or village. One of these comprises the former Canfield Park with its magnificent Italian gardens and beautiful landscapes, in which is located the old club house, for many years famed as the center of gaiety for the sporting classes, where could

be seen hundreds of handsomely gowned women and as many cultured men playing with dame fortune for fabulous stakes and crowding the superb dining hall. This beautiful and artistic building is now the Casino or Kursall and is thronged during the season by those seeking health, rest and recreation.

The natural advantages of Saratoga Springs as a health resort are too well known to need extolling here. Situated at the foot-hills of the Adirondacks, blessed not only with her springs but with the most invigorating, health-giving atmosphere anywhere to be found, and sunshine almost every day of the year, at an altitude high enough to insure dry, bracing air, yet not the extreme altitude of the mountains where many classes of patients cannot go, the fresh morning air laden with the exhalations from many pine and balsam woods, with wide, clean, beautiful shaded streets and avenues, and hundreds of miles of state roads radiating in different directions from the village, with ample accommodations for her visitors and some of the largest and most beautiful hotels in the land, Saratoga Springs is unequalled as a resort for the health-seeker.

ANTI-TYPHOID INOCULATION.

The Essay read at the Commencement Exercise of the Albany Medical College, May 14, 1912.

BY PAUL PATTENGILL GREGORY, M. D.

Typhoid fever has been engaging the attention of the medical mind, even from the earliest dawn of the profession; for we learn from the writings of Hippocrates, of the existence of a long continued fever with emaciation and death. But the disease was so insidious and protean in its manifestations, and so complex in its symptomatology, that it eluded all observers, and was not differentiated as a distinct clinical entity until 1842. The subsequent discovery of the typhoid bacillus, which is the specific infecting organism, added a most important fact to our knowledge of the disease, and stimulated further investigation, which has shown that this organism is usually conveyed through the medium of contaminated drinking water and food.

Therefore when it was understood, that: the ingestion of

typhoid bacilli would give rise to the disease in susceptible individuals; that the organism could live for months in ordinary ground-soil or water; and that a single case was capable of infecting perhaps thousands of others, then we can readily understand, why the prevention of typhoid is a question of such importance.

Among the preventive measures which are universally employed are: efficient filtration of all drinking water, careful inspection of milk and food supplies and thorough disinfection of all excreta. Although these prophylactic measures are good, they have their limitations, because some cases are not diagnosed until late in the disease and others recover their health fully, but still carry the germs in their systems, and are able to spread the infection for months.

It may be interesting at this point to review briefly the history of typhoid in our country, where it claims nearly fifty thousand victims per annum. In times of war typhoid has long been one of the greatest scourges of armies in campaign, sometimes crippling their fighting efficiency to a greater extent, than all other causes combined. In our American Civil War, eighty thousand men in the Northern Army alone, died of typhoid fever. In our late war with Spain sixteen hundred men succumbed to typhoid which made up 86% of the entire mortality of the war. So that the laconic saying that "An army has chiefly two foes, bullets and bacilli" seems entirely justified.

It was a realization of these tragic consequences, that gave an added impetus to the study of the disease, and has led to the discovery of the cellular reaction of the body against the bacillus and its toxine. This reaction takes place in the blood, and depends upon the resistance of the person, as opposed to the virulence of the infecting organism. The interpretation of this reaction, rests upon the fact that the human body, immediately upon the introduction of typhoid bacilli, manufactures an anti-toxine to combat the intruder.

The first practical use of this knowledge gave us a valuable test, whereby with the use of a few drops of the patient's blood and a culture of the living typhoid organisms, we are able to diagnose typhoid in all cases. Surely this was a great achievement, for the accurate diagnosis of typhoid had always been a

difficult task. But modern medicine, ever mindful that prevention is far more commendable, than the most brilliant diagnosis or cures, steps forward again and gives us a preventive measure, the anti-typoid inoculation, which is a scientific method of preventing typhoid, based on nature's method of combating the disease, and is analagous to the anti-smallpox vaccination.

The first work along this line was done twenty-six years ago, when several small animals were inoculated by repeated injections of living typhoid organisms. It was found by the laboratory test, that these animals gradually acquired an active immunity to typhoid. Later it was found that vaccine made of the dead organisms, was equally effective, and eliminated all possible sources of danger.

To Wright of England belongs the honor of first inoculating human subjects, which he did in 1898, when four thousand men in the British Indian army were inoculated; and two years later at the outbreak of the Boer war in Southern Africa, nearly one hundred thousand soldiers were inoculated with the anti-typhoid vaccine. The occurrence of the disease was lessened by one-half, but the reports were so at variance and the profession so skeptical, that it fell into temporary disfavor and disuse. Seven years later Dr. Leishman of the Royal Army Medical Corps, improved the method of preparing the vaccine, and showed that much of the earlier vaccine had been rendered inert by overheating.

In 1909, inoculation was begun in the United States army through the efforts of Major Russell who says: "At first volunteers were obtained with difficulty and it was only through the loyalty of the medical officers in town, who came bringing their wives, children and servants that we succeeded in arousing interest. In this way about one hundred and fifty persons were inoculated, most of whom became active missionaries in the cause." Since that time there has been no lack of volunteers and during the year 1910 about one-seventh of our regular army had been inoculated.

At the time of the mobilization of the army on the Mexican border last year, anti-typhoid inoculation was made compulsory in the regular army, and the whole force was inoculated as rapidly as the vaccine could be procured. When the maneuvers

ended after four months in camp, among a force of eighteen thousand men, there had been but one case of typhoid, while at the same time a considerable epidemic of typhoid had broken out in the nearby towns, thereby showing the prevalence of the disease in that vicinity, and strongly contrasting the immunity which the troops enjoyed, and the susceptibility of the non-inoculated, under like hygienic conditions, and with the same water supply.

Another instance of the remarkable value of this simple procedure, occurred during the preceding year in the Gettysburg army maneuvers. Part of the troops had been immunized with the anti-typhoid vaccine, and among them not a case of typhoid developed, while 25% of the non-inoculated contracted the disease, although they all lived under exactly the same conditions. Similar encouraging reports have come from the French and Japanese armies. And not only have brilliant results come from army circles, for the vaccine has been given a fair trial in several Massachusetts hospitals, among nurses and attendants, and its use was pre-eminently successful, as it has also proven in the private practice of many physicians.

As a result of fourteen years success we may safely conclude, that the experimental stage is past; that it is a safe and sure prevention from the dread typhoid.

We will now look for a moment at the method of preparing the vaccine material, in order to better understand the subservience of scientific principles in medicine, to their practical applications for actual prophylaxis and cure. The first step in preparation, consists in growing typhoid germs on artificial media, which is a comparatively simple procedure. After forty-eight hours, the germs are killed by heat and the necessary solution added to form a standard vaccine, with a definite dosage, which is based on the number of dead bacilli present.

The process of immunization consists of three consecutive sub-cutaneous injections at intervals of ten days each. The first dose is five hundred million, and the second and third injections consist of one billion each of the dead bacilli. After each injection the patient usually develops some headache and a moderate rise of temperature but the discomfort is slight and of but few hours duration.

Surely this is a very light penalty to pay for the freedom from the disease, which has breathed its baneful effects alike upon the rich and poor, the civilian and the soldier. And I am certain that those who have witnessed the slow and insidious approach of the disease, which gradually weakens and exhausts its victims, with a grim persistence that would be commendable in a better cause; those, I say, who have seen the treacherous complications extinguish the patient's life, just as a favorable result was almost assured, will agree, that in the use of anti-typoid vaccine, we have a means of alleviating a great deal of suffering and of saving each year many thousands of lives.

The duration of the immunity thus conferred is an important matter, which is not definitely settled as yet. By all who have had experience, it is believed to protect absolutely for a period of three years and perhaps longer. Reasoning from this basis, the United States Government requires that all officers and privates, who have not had an authenticated case of typhoid, shall be inoculated immediately upon their enlistment, thereby rendering them immune from typhoid during their three years' term of service. But its use should not be confined to the army, for it is applicable to all persons, especially during the prevalence of an epidemic, for the typhoid bacillus is an active foe, at all times demanding prompt and intelligent action.

With the knowledge of the advantages to be gained by this prophylactic measure, it is the duty of the medical profession to instruct the laity in regard to anti-typoid inoculation. And if we have co-operation on the part of the profession and the people, it will be but a few years before typhoid fever will be unknown in civilized countries, and one of the greatest scourges which has been inflicted upon the people through all the ages of history, will have disappeared from the earth.

The tendency of the world to-day is to preserve, not destroy; to build up rather than tear down. Honor is given to the man whose victories are those of peace rather than of war. Human life is far too precious to be sacrificed, when the only excuse is the petty quarrels of monarchs or the greed of kings. And on the honor roll of all nations to-day, pre-eminently stands the name of him, who saves rather than sacrifices, the lives of his people.

LORD LISTER AND THE ERA OF MODERN SURGERY.

*The Valedictory Address Delivered at the Commencement Exercises of
the Albany Medical College, May 14, 1912.*

BY WILLIAM HENRY SEWARD, M. D.

It seldom falls to the lot of a man to set on foot a great reform and live to see it universally adopted, to be hailed in his own lifetime as one of the greatest benefactors of humanity. Yet that was the fortunate fate of Lord Lister, the father of antiseptic surgery who died February 11, 1912, at the age of eighty-five years.

Unquestionably to Lord Lister more than to anyone else, the present status of surgery is due. While it is true that antisepsis has been superseded to a large extent by asepsis, it cannot be denied, that Lister's comprehension of wound infection laid the foundation for modern surgical technique. To him, then, all credit belongs for the epoch-making studies which paved the way for the remarkable successes of present day surgery. In spite of the general adoption of his methods, and the complete affirmation of his original views on the role of germs in the causation of suppuration, he never showed the slightest pride or self-appreciation. Although he must have realized the part he had played in the evolution of surgery, he never, by word or deed, gave any reason to believe that he expected any glory or credit for his achievements. Honors, to be sure, did come to him and he lived to see his name and work esteemed by all mankind, but he never changed his manner and to the last remained the humble, reserved and gentle physician, proud only of his profession and grateful for the opportunities it offered him to serve his fellow-beings. Although in his eighty-fifth year when he died, his life was still an active one, at once an example and an inspiration to his colleagues.

Joseph Lister, the pioneer of antiseptic surgery, was born at Upton, in Essex, in 1827, his father, Joseph Jackson Lister, F. R. S., being the inventor of the achromatic microscope. He was educated at a Quaker school in Tottenham and lived from childhood in an atmosphere of scientific research. He received the degree of M. B. at the London University in 1852 and in the same year took the F. R. C. S. England.

After holding office for a time as resident assistant in University College Hospital, Lister went to Scotland, where he remained, first as a supernumerary dresser under Mr. Syme, and afterwards as his house surgeon. On resigning his post, in 1856, he married Mr. Syme's daughter and was soon afterwards appointed assistant surgeon to the Edinburgh Royal Infirmary. In this position he began to teach as a private lecturer on surgery recognized by the University, and continued to do so until his appointment to the Chair of Surgery in the University of Glasgow in 1860.

Lister had a natural bent to science which brought him into intimate association with some of the ablest men of the staff of his teachers, among whom, Graham, Sharpey and Wharton Jones may be specially mentioned. While house surgeon at University Hospital, he had charge of certain cases during an outbreak of hospital gangrene and carefully observed the phenomena of the disease and the effects of treatment upon it. He was thus early led to suspect the parasitic nature of the disorder and searched, with the microscope, the material of the spreading sore; in the hope of discovering in it some invading fungus; he soon convinced himself of the cardinal truth, that its causes were purely local. He also minutely investigated cases of pyemia, another terrible scourge of hospitals and made camera lucida sketches of the appearances revealed by the microscope.

To realize Lister's work, it is necessary to remember the condition of surgical practice at that date. About the middle of the nineteenth century, the introduction of anesthetics had relieved the patient of much of the horror of the knife, and the surgeon of the duty of speed in his work. Yet unhappily, this new enfranchisement seemed to be but an ironical liberty of nature, who with the other hand took away what she had given. Direct healing of surgical wounds by first intention far from being the rule, was a piece of luck too rare to enter into the calculations of the operator, while of the graver surgical undertakings, however successful mechanically, the mortality by sepsis was ghastly. At all times, suppuration, phagedena and septic poisonings of the system carried away even the most promising patients and followed even trifling operations. Often, too, these diseases rose to the height of epidemic pestilences so that patients,

however extreme their need, dreaded the very name of hospital and the most skillful surgeons distrusted their own craft.

When Lister took up the task, speculation was on the wrong track; the oxygen of the air was then supposed to be the chief cause of the dissolution of the tissues and to prevent access of air was impossible.

From Pasteur, Lister derived, no doubt, two fruitful ideas: First, That decomposition in organic substances is due to living germs. Second, That these lowly and minute forms of vegetable life spring always, like higher organisms, from parents like themselves, and cannot arise in the animal body. These two great theories established by Pasteur seemed to Lister to open out the possibility of what had before appeared hopeless, viz.: the prevention of putrifaction in the wound and consequently, the forestalling of suppuration. To exclude the oxygen of the air from wounds was impossible but it might be practicable to protect them from microbes.

The first attempt to realize this idea was made upon compound fractures and the means first employed was carbolic acid, the remarkable efficacy of which in deodorizing sewage made Lister regard it as a very powerful germicide.

The results after a first failure were in the highest degree satisfactory so that as Lister said in his presidential address to the British Association in Liverpool he "had the joy of seeing these formidable injuries follow the same safe and tranquil course as simple fractures."

In consequence of this discovery, operations of much greater magnitude were undertaken with confidence by surgeons which formerly none dared to perform. The system soon spread, and was speedily taken up in Germany as well as in this country.

Another great advance in surgical art is also associated with Lister's name—the use of the absorbable cat-gut ligature, which he introduced as a substitute for the silken or flax thread hitherto exclusively used.

How great a change was brought about by Lister and his methods is well shown by the statistics of the death rate in the Royal Infirmary at Glasgow, where much of his work was done. In 1864, the death rate in major operations was 45%. Two

years later, "Listerism" had reduced it to 15%, and from 1871 to 1877, further betterments and greater care had cut it to 12%.

The honors that awaited him were perhaps of little importance bestowed. On Mr. Gladstone's recommendation he was, in 1883, made a baronet, and in 1897, he was raised to the peerage. In 1902, he was appointed a member of the newly instituted Order of Merit as well as a P. C. From 1895 to 1900, he was president of the Royal Society. He was sergeant-surgeon to Queen Victoria and to King Edward and has been president of the British Association for the Advancement of Science. His other scientific distinction are too numerous to mention in this brief outline of his career.

With his passing, therefore, much as everyone must regret the closing of his career, there comes a feeling of heartfelt gratitude that a man whose life has meant so much to humanity lived in our age.

Although ennobled by a grateful sovereign, his work and the fruits thereof gave a nobility to Lister's life that will be remembered long after his title has been forgotten. Indeed as long as men shall live, the memory of Lister will endure as the one who freed mankind from the tyranny of germs—the bondage of infection.

ASSOCIATION OF THE ALUMNI OF THE ALBANY MEDICAL COLLEGE—THIRTY-NINTH ANNUAL MEETING.

The thirty-ninth annual meeting of the Association of the Alumni of the Albany Medical College was held in the amphitheatre on Tuesday, May 14, 1912. The usual informal reception was held in the college library, where photographs were exhibited, and greetings exchanged between the hours of 9 and 11 A. M. The meeting was called to order by Vice-President Dr. Arthur B. Van Loon ('91) of Albany, N. Y., at eleven o'clock. In taking the chair Dr. Van Loon presented the following letter from Dr. William Asbury Hall ('75) the President of the Association:

MINNEAPOLIS, April 25, 1912.

Dr. J. N. VANDER VEER, 28 Eagle Street, Albany, N. Y.

Dear Doctor: It is with unspeakable regret that I am obliged to notify you that it will be impossible for me to be present at the meeting of the Alumni Association on May 15th next. On April 6th last, while out of the city on professional business, I had a very severe attack of ptomaine poisoning and was very ill for three days. The sepsis was so acute that it was immediately followed by multiple neuritis which has practically incapacitated me from all effort both mental and physical. I am improving, but the cramping in my arms, hands and feet persists and I am very unsteady on my legs. I have been hoping that I should be well enough to go east in May, but I am now convinced that I shall be unable to travel at that time. Of course, you will notify the First Vice-President that it will be his duty to officiate at the meeting. If I am able I will dictate a letter which may be read to the Alumni. It is a very great disappointment to me that I cannot be present, but I am forced to accept the inevitable.

Sincerely yours,

WM. ASBURY HALL.

The following named members of the Association, with invited guests, students of the college and others interested, were present: Herman Bendell, Albert Vander Veer, ('62); Alfred B. Husted, ('63); Charles F. Scattergood, ('68); D. C. Case, Willis G. Tucker, ('70); G. L. Ullman, ('71); F. M. Boyce, G. S. La Moree, ('72); Daniel H. Cook, ('74); E. Rulison, ('75); D. H. Lown, M. M. Lown, ('77); J. H. Cotter, Chas. A. Ingraham, G. P. K. Pomeroy, ('78); E. A. Bartlett, W. C. Crombie, W. J. Nellis, ('79); J. H. Mitchell, ('81); W. E. Deitz, A. Y. Myers, William B. Sabin, ('82); Robert Babcock, M. A. Wheeler, ('84); E. E. Finch, ('86); A. MacFarlane, Chas. H. Moore, J. E. Sadlier, Francis W. St. John, Thomas H. Willard, ('87); John Archibald, G. G. Lempe, ('88); J. M. Mosher, F. S. Snow, Wm. Van Doren, ('89); Walter H. Conley, Arthur B. Van Loon, ('91); LeRoy Becker, F. J. Cox, G. M. Fisher, W. I. Goewey, J. B. Grover, G. S. Haswell, H. E. Lomax, Leo H. Neuman, ('92); T. W. Jenkins, P. G. Waller, ('93); Walter C. Gilday, G. W. E. Goodell, A. Sautter, ('94); Garrett V. Johnson, ('96); W. L. Fodder, H. J. Lipes, ('97); Charles S. Prest, A. H. Traver, E. A. Vander Veer, ('98); E. E. Hinman, Joseph S. Lanahan, ('99); A. J. Bedell, L. O. White, ('01); LaSalle Archambault, Hugh M. Cox, A. J. Freutel, S. S. Ham, Edwin A. Mason, Frank

M. Sulzman, ('02); E. M. Griffith, J. N. Vander Veer, ('03); J. I. Cotter, B. K. DeVoe, ('04); C. W. L. Hacker, C. A. Hemstreet, M. J. Keough, G. W. Papen, Jr., H. M. Southworth, J. W. White, ('05); V. R. Ehle, C. B. Hawn, ('06); E. Corning, J. L. Donhauser, A. W. Grover, Tiffany Lawyer, ('07); H. H. Drake, W. C. Egerton, E. S. Haswell, ('09); P. C. Hacker, E. W. Hannock, W. S. Lilienthal, ('10); W. W. Millias, J. H. Mitchell, Jr., ('12); Samuel B. Ward, (Hon.).

On motion of Dr. Jas. N. Vander Veer, the reading of the minutes of the last annual meeting was dispensed with and the minutes were approved as printed in the ALBANY MEDICAL ANNALS.

The President introduced Professor Arthur W. Elting, who delivered the following address of welcome on behalf of the faculty:

ADDRESS OF WELCOME.

DR. ELTING'S ADDRESS.

It gives me great pleasure on behalf of the Faculty of the Albany Medical College to extend to you the cordial welcome of your Alma Mater and to deliver into your hands not only the keys of the Medical College, but also the keys of as much of the city as you may wish to appropriate to your use. The custom of having each year an Alumni Day, when graduates of the Institution are urged to return to renew old acquaintances, form new ones, and inspect the progress of the College, is an old and important one to which every alumnus should, if possible, contribute by his presence. One of the most important pillars of every educational institution is its body of alumni and of no institution is this more true than of a medical college.

Experience in the practice of medicine and surgery has not only taught you any short-comings in your own education, but has especially emphasized the needs and demands of modern medical science and has placed in your hands knowledge which can be of the greatest assistance to the Faculty in shaping the course of medical education in the College. Upon you and really upon you alone rests the glory of the College, for both men and institutions are judged by their works. If the instruction in the College is faulty, it will soon be reflected by a lack of attainment among the alumni and it is the duty of the alumni to give expression of their approval or disapproval of the methods of teaching employed in the College.

It occurred to me that it might be well at this time to submit frankly for your consideration a few matters which we deem of the most vital importance to the continued honorable life and activity of the Albany

Medical College. Within the past few years a great change has taken place in the methods of teaching medical science and it has been necessary to remodel much of the work done in the College to conform to the demands of the times and to place our graduates upon a standing of reasonable equality with that of the graduates of other leading medical institutions. All of these changes have necessitated the expenditure of considerable sums of money for equipment and salaried teachers. These expenses have been met by the Faculty so far as possible, but we must nevertheless confess that in many ways we are woefully deficient, and these deficiencies must be supplied in the near future or else the continued existence of the College will be seriously jeopardized.

The demands of modern medical education, coupled with the requirements of the laws of the State, make it imperative that most, if not all, of the so-called fundamental branches of medicine, such as anatomy, physiology, physiological chemistry, pharmacology, bacteriology and pathology, should be taught by trained laboratory men, employing the most modern scientific methods. In order that this may be done, funds must be provided for the salary of such teachers as well as for laboratory facilities.

For many years the Albany Medical College, through the devotion of its Faculty and teachers, has been able to keep abreast of the times with little or no endowment, due to the personal interests and sacrifice of its teaching staff. This same feeling of devotion and self sacrifice still exists to-day, but unfortunately we can at this time scarcely command a sufficient force of trained laboratory teachers to meet the requirements of the laws of the State, and we find ourselves face to face with a problem the solution of which cannot be long deferred.

The one great and pressing need of the hour is an endowment fund of sufficient proportion to enable the College to employ the necessary teachers and to provide them with sufficient equipment. It might be advisable for the alumni of different localities to raise funds for the endowment of chairs in the different fundamental scientific departments. This is probably the best way in which money could be used in advancing the teaching in the College. Such a scheme might also lead to a healthy rivalry between the alumni associations of different sections in raising endowments for different chairs. In this way the immediate and personal interest of the alumni in the different departments would be insured and they would be thoroughly conversant with the manner in which the funds they might contribute were employed.

A new laboratory is greatly to be desired, but of what use will a new laboratory be without endowment to ensure its efficiency. We should certainly like to have a fine array of new buildings, and it is to be hoped that eventually some will be forthcoming, but the one most pressing need at this time is some form of endowment, the income of which can be used to supplement the teaching staff. Fine buildings are not half as potent in attracting students or training skilled physicians and surgeons

as trained teachers, and while we should like to have both, if limited to the choice of one, we must choose the latter.

While by no means modern in its equipment, this old College building, so dear to the memory of you all, has answered well for many years the demands put upon it, and with some alterations can be made to answer for a time longer, until our first problem of endowment having been settled, the question of new buildings can be adjusted. We should not wait for the laws of the State to force us into the acceptance of the new methods of medical education but we should always endeavor to be some distance in advance of the demands of the law.

It may seem that I have spoken rather plainly and frankly to you of our problems and difficulties as I see them, but I feel that the alumni should enjoy our confidence, should know our aims and should take an active hand in the solution of the problems. The main stay of the College for four score years has been the body of alumni, never so powerful and influential as to-day. I am sure you do not want your illustrious Alma Mater to close its doors, or what is even worse, to pass into decadence and become an object of serious and just criticism by the medical profession at large. You have in your hands the ability and power to place the College squarely upon its feet and to insure its future life and usefulness if you wish to exercise them.

But few medical schools in America can offer the student better clinical facilities or better clinical teaching than we have here in Albany, but the highest type of clinical teaching avails but little if the students have not been thoroughly grounded in the fundamental medical sciences, and above all have been taught to approach all medical problems from a scientific view point. On the part of the Faculty and the profession of Albany and vicinity I can assure you of the most hearty co-operation but we have reached a point where we need more than expressions of good will. We need and must have added funds to supply the deficiencies now existing and to insure the future growth and influence of the College.

I trust you will pardon the plainness and directness with which I have spoken, but I feel that you should be acquainted with the essential facts, knowing which I firmly believe you will put in motion the wheels which will mean renewed life and increased vigor in your Alma Mater.

On motion of Dr. Arthur Sautter the thanks of the Association were tendered Professor Elting for his address, and a copy was requested for publication.

Dr. Willis G. Tucker then moved that the President appoint a committee of five to nominate officers for the ensuing year. Carried. The President appointed as such committee: Drs. Willis G. Tucker ('70), William B. Sabin ('82), Edgar A. Vander Veer ('98), William H. Murray ('69), and Daniel C. Case ('70).

The Recording Secretary presented the

**REPORT OF THE EXECUTIVE COMMITTEE AND RECORDING
SECRETARY.**

A regular meeting of the Executive Committee of the Alumni Association of the Albany Medical College was held in the library of the Albany Medical College, on March 27, 1912. Drs. W. G. Tucker, Babcock, J. N. Vander Veer and Corning were present.

On motion of Dr. Vander Veer, Dr. Tucker took the chair and appointed Dr. Corning to act as Secretary *Pro Tem* in the absence of Dr. Mosher.

Dr. Babcock presented the Treasurer's report as follows:

Balance April 1, 1911.....	\$59 64
Dues received	165 00
<hr/>	
	\$224 64
Expenses.	135 44
<hr/>	
Balance.....	\$89 20

Dr. Babcock explained that there were still some bills to be met that had not yet been turned in.

Dr. Corning moved that the chair appoint a committee of arrangements to attend to the details of the annual meeting.

Dr. Tucker appointed Drs. Nellis, J. N. Vander Veer, Mitchell of Cohoes, and Corning (Chairman).

Dr. Vander Veer moved that the Faculty be asked to designate a member of their body to deliver the address of welcome at the annual meeting. Dr. Tucker said that he would transmit this request to the Faculty.

As there was no further business the meeting adjourned.

ERASTUS CORNING,
Secretary Pro Tem.

On motion of Dr. James N. Vander Veer, the report of the Executive Committee was accepted and ordered entered upon the minutes.

The Treasurer, Dr. Robert Babcock, presented his report for the year as follows:

TREASURER'S REPORT.

CR.

Balance on hand May 1, 1911.....	\$59 64
Dues received during year 1911.....	146 00
<hr/>	
Total	\$205 64

Dr.

Various bills paid for which vouchers are presented.....	150 50
Balance on hand May 1, 1911.....	\$55 14
College Building Fund	\$122 29
[Signed]	ROBERT BABCOCK, <i>Treasurer.</i>

On motion of Dr. Willard, the Treasurer's report was referred to an auditing committee, consisting of Drs. Willard and MacFarlane, who subsequently reported it correct. The report of the Auditing Committee was received and the committee discharged, and the report of the Treasurer was accepted and ordered placed on file.

Vice-President Van Loon announced the next order to be

MISCELLANEOUS BUSINESS.

The report of the Committee on the ALBANY MEDICAL ANNALS was read by the Recording Secretary, as follows:

ALBANY, N. Y., May 14, 1912.

To the Alumni Association of the Albany Medical College:

The Committee on the ALBANY MEDICAL ANNALS would respectfully report that the year has been a successful one in its publication. Its contributors have remained loyal and have presented up-to-date papers in every respect, thus enabling the journal to take a prominent position among the monthly medical publications. Its finances are in a wholesome condition, but all of its income must necessarily be expended for printing and clerical services. We desire to emphasize the importance and necessity of enlarging our subscription list and trust the members of the Alumni Association will see their way clear to giving prompt personal attention to this subject.

Respectfully submitted,

A. VANDER VEER, M. D.,

W. G. TUCKER, M. D.,

ANDREW MACFARLANE, M. D.,

Alumni Committee.

Dr. Corning as Chairman of the Banquet Committee announced arrangements made for the program of the day and evening.

Dr. Mitchell then submitted the following

REPORT OF COMMITTEE ON RECOMMENDATIONS OFFERED BY
PRESIDENT LOWN AT THE ANNUAL MEETING,
MAY 16, 1911.

To the Members of the Alumni Association of the Albany Medical College:

Your committee, the undersigned, selected by you to consider the recommendations of the retiring President, Dr. M. M. Lown, '77, would respectfully offer the following report for your consideration:

A meeting was held on Tuesday, March 26, 1912, at which Drs. Mitchell, Root and J. N. Vander Veer were present.

Dr. Mitchell acted as Chairman and Dr. Vander Veer as Secretary.

The object of the meeting having been stated it was moved and carried that we proceed with each recommendation singly.

1. "It might be well for the Association to appoint a committee of five from its membership, and which should be carefully chosen, to consider the remodeling of our Constitution. They might also take into consideration the wisdom of having the Executive Committee hold quarterly meetings at which time any suggestion or communication from the Alumni could be discussed and all matters be put into good shape for discussion at the annual meeting. They also could probably evolve a better or more satisfactory scheme for the election of our officers than prevails at present."

i. A. Your committee heartily approves of the appointing by the Association of a committee of five to remodel the Constitution and trusts the matter will be expedited as rapidly as possible.

B. The question of quarterly meetings of the Executive Committee should be discussed by the Association; but it is our opinion that there should be a stated meeting of the Executive Committee at least eight weeks before the meeting of the Association and that at this meeting any communications should be passed upon and the same ordered transmitted to the Association with the annual notices.

C. We recommend that the Committee on Revision of the Constitution consider carefully the various methods of nominating and electing officers, and adopt that method which seems most feasible for our Association.

2. "The general condition of this Association is not in any sense what it should be, and is capable of being, and I believe it would be profitable for us to discuss this matter before the tide recedes still further."

We recommend that the members come to this meeting prepared to discuss this question fully.

3. "The class histories and photographs now stored in the College Library, which are too valuable to be lost and which could not be replaced, should be placed in some secure building."

We recommend this suggestion for discussion, with the thought that power be given the Historian to make such provision at a nominal cost.

4. "It has been suggested that a museum of instruments be instituted

and I understand that there are many ancient and historic instruments in the office lately occupied by Dr. Macdonald that could be obtained as the beginning of such a collection."

We coincide with this suggestion, but in view of present conditions, we suggest waiting for a more proper time.

5. "I think we should have a committee report on the ANNALS each year, together with other matters pertaining to it, which might serve to augment interest in this publication and increase its circulation."

We would recommend that this suggestion be referred to the regular committee, Dr. A. Vander Veer, Dr. Tucker and Dr. MacFarlane, with the recommendation that a full report be made each year as to the financial condition, the number of subscribers, and such other matters in relation to our journal as might interest our Alumni.

6. "The small sum of one dollar a year Alumni dues is hardly up to the spirit of the times, and it leaves no fund for any purpose."

We recommend that the annual dues be two dollars, that our Association may be independent and have sufficient funds to keep in touch with its members at all times.

7. "Is this society willing that those who do not pay dues, and hence, are not members, should enjoy its privileges and take an active part in its proceedings?"

We believe that only those who have paid their dues should be allowed to take active part in our Association proceedings.

8. "Any suggestions that are made for discussion leave so little time for thought when the Executive Committee makes its annual report that I think it would be well for them, after their last meeting, to send to each member a letter stating the principal subjects which are to be discussed at the annual meeting."

We deplore the scant time given for discussion to questions raised in the Executive Committee's report, owing to the unpreparedness of the members of the Association to receive and we would recommend that this report be sent to the active members of the Association for perusal, in advance of the annual meeting.

9. "I believe there are three branches of the general Alumni Association in New York City, New England, and Central New York. Might it not add to the interest of each of these as well as the general Association to have them in some manner represented?"

We recommend that this suggestion be referred to the new Committee on Constitution, with the suggestion that the present Executive Committee of the General Alumni Association be reduced to fifteen members; and that provision be made so that each Auxiliary Alumni Association may have a duly accredited representative on our general Executive Committee.

All of which is respectfully submitted,

JAMES H. MITCHELL, M. D., '81.

ARTHUR G. ROOT, M. D., '90.

JAMES N. VANDER VEER, M. D., '03.

Dr. Mitchell then moved that a committee of five be appointed by the President-elect to consider this report. Carried.

Dr. Willard made an informal report upon the activities and condition of the Alumni Association of the City of New York.

Vice-President Van Loon read the following communication from Dr. William Asbury Hall, the President of the Association:

MINNEAPOLIS, May 11, 1912.

Fellow Alumni of the Albany Medical College:

It was with feelings of unspeakable regret last month that I was obliged to notify your Secretary, Dr. J. N. Vander Veer, that my physical disabilities would prevent my being with you at this meeting. While many medical honors have come to me during the past, nothing has so touched my heart as my election as President of the Alumni Association of the Albany Medical College. Little did I dream when I left her protecting wings thirty-seven years ago that such an honor would ever come to me. But such was my lot; and, now that I cannot be with you at this time, my disappointment is intensified accordingly.

I had intended writing my address upon the subject of "Education in General and Medical Education in Particular," a subject which has been near to my heart for several years; but I have been unable to do so. The pendulum of medical education has swung through a mighty arc since 1875, impelled by the discovery and acceptance of Virchow's cellular pathology, the labors of Pasteur and a host of others, and the fight that the late lamented Lord Lister made that "surgeons should keep their finger nails clean." A mighty impulse was given to surgery, and hundreds and thousands of lives have been saved in consequence. But there is always a dark side to every picture and, while the benefits to humanity have been great, still it has enabled a horde of incompetent so-called surgeons to perform operations that have not killed their patients outright, but have wrought havoc worse than death itself. The studies in histology, pathology, and bacteriology have wrought wonders. The use of diphtheria antitoxin has saved thousands of lives and made the operation of tracheotomy for membranous croup practically unheard of. But there is a dark side to this picture also; and the experiments of the laboratory men in developing the so-called opsonic index and the injections of virulent poisons into the human system is leaving a trail of death and destruction behind it. So interesting have been the studies in bacteriology and pathology that many of the leading lights in the profession have had more interest in knowing whether the autopsy would confirm their diagnosis than in assisting nature in effecting a cure of the various ailments of their patients; and as a consequence there has grown up a class of "medical nihilists," so far as medicines are concerned.

But I can only touch very briefly upon these things. One of the worst tendencies of modern times in medical circles has been the attempt of

the heavily endowed private medical colleges and the state colleges supported by the peoples' money to try and wipe out of existence the smaller colleges by means of unnecessary and unreasonable requirements through the Association of American Medical Colleges. They are trying to convince the profession and the public that the value of a medical college depends upon the size of the pillars in front and the amount of nickel plate upon the front door. But they will fail, for it is a well recognized fact that the best work and the best results are achieved in the smaller colleges and not in the large ones. The large medical institutions to-day are engaged in preparing through their great laboratories a delightful *predigested emulsion of medical knowledge* and pouring it into the brains of their students through a funnel. It nourishes their brains and has precisely the same effect that it does to feed the stomach with predigested food; both organs lose their functions, the stomach cannot digest and the brain cannot think. The best system of all education is that system that furnishes the student the inspiration to study, enables him to know how to study, and develops a capacity for work. College life is but a preparation for future work. But the pendulum is beginning to swing backwards, and we will in a short time know better just where we stand.

But I am already transgressing the limits of what I intended to be simply a letter of congratulation to the Alumni of the Albany Medical College. As the years have come and gone I have been more and more thankful that I am enrolled as one of her members, for I feel that I am in a position to know when I make the statement that of all the colleges in our land there is none whose graduates have uniformly "made good" to any greater extent than have those of the Albany Medical College. I trust and have no doubt but that you will have a highly successful meeting. I am in hearty sympathy with the report of the committee on the recommendations offered by our former President, Dr. Lown, and hope they will be adopted.

And now again expressing my regret that I cannot be with you at this time, and trusting for a bright future for our Alma Mater, which is what it is because of the sterling manhood and life devotion of the men who have composed its faculty since 1839, and with best wishes to you all, I remain,

Faithfully yours,

W.M. ASBURY HALL ('75),

President.

The report of the Historian of the Association, Dr. Bedell, was then presented and ordered entered on the minutes.

REPORT OF THE HISTORIAN, ARTHUR J. BEDELL, M. D.

Mr. President and Fellow Alumni:

During the past year the College Trustees have been given a deed to the buildings and land now called the Penitentiary site and yesterday

the papers were signed. Many active men are considering ways and means to get the buildings which will assist in maintaining our high standard of medical education.

Since our last meeting Doctors Elting, E. A. Vander Veer, Sampson and Bernstein have been added to the Faculty. Less than a month ago it was announced that six professors would devote their entire time to teaching in accordance with the latest Regent's ruling.

For more than a year we have all missed the State Medical Library, but in October we enter the beautiful new building with more and better medical books than at the time of the fire so that our student body will profit much by reading under ideal conditions.

Forty-three men enter our Association to-day. We consider them the best trained graduates of our College and expect them to prove their value by conscientious devotion to their patients. We urge them to send a card telling of their location, marriage, etc. The Historian wishes facts regarding every alumnus and will gladly use the same in the ANNALS.

To-day we celebrate the return of the decennial classes.

As far as known all of the twenty-seven graduates of 1842 have died.

In 1852 twenty-nine men left the College, and as far as our records go the last to die was Dr. F. J. Stevens in March 7, 1912.

1862 will be reported by Dr. Herman Bendell, 1872 by Dr. Joseph H. Blatner, 1882 by Dr. William B. Sabin, 1887 by Dr. Charles H. Moore, 1892 by Dr. William G. Lewis and 1902 by Dr. Hugh M. Cox.

NECROLOGY.

During the year thirty-two of our Alumni have died.

Dr. Rensselaer Ottman ('44), Carbondale, Pa., Jan. 29, 1912, aged 91.

Dr. John A. Warner ('47), Saratoga Springs, N. Y., Oct. 23, 1911, aged 88.

Dr. Francis J. Stevens ('52), Haverhill, Mass., March 7, 1912, aged 88.

Dr. George D. Whedon ('53), Syracuse, N. Y., Feb. 14, 1912.

Dr. Hamilton DeGraw ('55), Brookfield, Mo., Feb. 1, 1912.

Dr. John H. Stevens ('57), Roger's Rock, Ark., Feb. 9, 1912, aged 76.

Dr. George W. Little ('58), Glens Falls, N. Y., Dec. 16, 1911, aged 76.

Dr. John J. Van Rensselaer ('59), Dougan Hill, June 18, 1911, aged 75.

Dr. John P. Shumway ('60), Los Angeles, Cal., March 17, 1912, aged 75.

Dr. Henry A. France ('64), Far Rockaway, N. Y., April 13, 1912, aged 78.

Dr. Jehiel Lefler ('64), Johnstown, N. Y., Oct. 23, 1911, aged 68.

Dr. Leslie Martin ('64), Gowanda State Hospital, Nov. 30, 1911, aged 69.

Dr. Christopher C. Reid ('64), Rome, N. Y., Sept. 29, 1911, age 72.

Dr. Charles H. Terry ('64), Brooklyn, N. Y., Jan. 18, 1912, aged 67.

Dr. David F. Ernest ('67), Port Norfolk, Va., March 28, 1912, aged 66.

Dr. J. Wiltsie Knapp ('72), Syracuse, N. Y., April 14, 1911, aged 58.

- Dr. Eugene M. Draper ('73), Pasedena, Cal., Dec. 28, 1911, aged 58.
 Dr. John A. Johnson ('77), Chateaugay, N. Y., Aug. 12, 1911, aged 72.
 Dr. John G. Dickson ('79), Bovina Center, N. Y., Jan. 10, 1912.
 Dr. Sidney F. Rodgers ('82), Cohoes, N. Y., aged 65.
 Dr. James G. Entwistle ('83), Canton, Ill., Sept. 1, 1911, aged 69.
 Dr. Clinton G. Cooley ('84), near Pine Bush, N. Y.
 Dr. William P. Brierly ('86), Albany, N. Y., June 22, 1911.
 Dr. Cornelius W. DeBaun ('87), Fonda, N. Y., Aug. 18, 1911, aged 46.
 Dr. Elmer L. Fletcher ('87), Eugene, Ore., Nov. 10, 1911, aged 49.
 Dr. Charles F. Clowe ('88), Schenectady, N. Y., April 27, 1912, aged 45.
 Dr. A. Herbert Bayard ('89), Cornwall, N. Y., Aug. 3, 1911, aged 42.
 Dr. Charles W. Nichols ('89), Whitesboro, N. Y., April 23, 1911, aged 62.
 Dr. Edward B. Coburn ('90), New York City, Aug. 10, 1911, aged 43.
 Dr. George H. Reynolds ('91), Niwot, Colo., March 21, 1912, aged 46.
 Dr. Robert E. Doran ('93), Flat Bush, L. I., Sept. 23, 1911, aged 42.
 Dr. John A. Wilder ('95), Hoosick Falls, N. Y., Sept. 14, 1911, aged 48.
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CLASS OF 1852.

The members of the class of 1852 were:

JAMES H. ALLEN, Gorham, N. Y., died Oct. 11, 1897.

ORSON BARNES, Paterson, N. J., died.

GEORGE D. BASSETT.

CHARLES G. BRYANT.

JAMES E. CASEY, Mohawk, N. Y., died May 18, 1907.

JAMES W. COX, Albany, N. Y., died June 9, 1896.

WILLIAM H. CRAIG, Albany, N. Y., died Oct. 4, 1889.

EZRA D. HUNTLEY, Trinidad, Colo., died Jan. 13, 1889.

THOMAS LAWYER.

JOHN E. LOSEE, Madalin, N. Y., died Dec. 22, 1900.

JOHN W. MOWER, Little Valley, N. Y., died 1897.

PHILIP W. MULL, Ghent, N. Y., died May 31, 1900.

GEORGE H. NOBLE, Cairo, N. Y., died Aug. 4, 1899.

JAMES G. PARSHALL, Cooperstown, N. Y.

LUCIUS G. ROBINSON.

WILLIAM H. RUNKLE, Winton Place, Ohio.

ANDREW E. SAFLEY.

ZEBULON W. SCRIVEN, died Feb. 11, 1896.

HENRY SLACK, Fishkill Landing, N. Y., died Dec. 10, 1886.

HENRY T. SPENCER.

ASA STERNBERG.

FRANCIS J. STEVENS, Boxford, Mass., died March 7, 1912.

DAVID VAN DYCK, Brooklyn, N. Y., died Dec. 29, 1896.

PALMER M. WAY.

CHARLES T. WEBB.

JOSEPH L. EVER, Leavenworth, Kan., died Sept., 1905.

JOHN P. WITBECK, West Troy, N. Y., died 1873.

ISAAC N. WYCKOFF.

DAVID YATES.

IRA ZEH.

CLASS OF 1862.

Dr. Vander Veer and myself were the only members of the class of 1862 present at the last meeting of the Alumni Association.

Dr. Walter M. Fleming, of New York City, and Dr. C. M. Frisbee, of Bainbridge, N. Y., are dead.

Dr. L. C. B. Graveline is living at Nassau, Rensselaer Co., N. Y.

Dr. I. Lowe is living at Canaan, Somerset Co., Me.

Dr. John L. Perry resides at Saratoga Springs, N. Y. Has not practiced for a number of years.

Dr. J. Rippey, Muskegon, Mich., retired from the practice of medicine and is now a minister of the Gospel.

Dr. John L. Van Alstyne is actively engaged in practice at Binghamton, Broome Co., N. Y.

Dr. S. P. Wright I believe is in the drug business at Wilmington, N. C.

HERMAN BENDELL,

Historian '62.

CLASS OF 1862.

The members of the class of 1862 were:

J. NEWTON ARNOLD, Clyde, N. Y., died May 17, 1902.

HERMAN BENDELL, Albany, N. Y.

WILLIAM A. BLISS, Brooklyn, N. Y., died Aug. 19, 1906.

CHARLES G. BRISTOL.

CALEB CLARK.

HENRY K. CLARKE, Ocoee, Fla., died Dec. 4, 1896.

LYNDHURST C. DODGE, Rouses Point, N. Y., died Aug. 12, 1904.

OWEN J. EVANS, Minneapolis, Minn.

HIRAM R. FIELD, Port Henry, N. Y., died June 13, 1895.

WALTER M. FLEMING, New York City, died.

CHARLES M. FRISBIE, Bainbridge, N. Y., died.

LOUIS C. B. GRAVELINE, Nassau, N. Y.

H. J. HORTON, died June 20, 1876.

ALBERT P. JACKSON, Oakfield, N. Y., died Nov. 9, 1910.

THEODORE Y. KINNE, Paterson, N. J., died March 6, 1904.

EDMUND K. LADE.

IVORY LOWE, Canaan, Me.

WILLIAM G. MILLER.

J. FRANK PATTERSON.

JOHN L. PERRY, Part Prop. Hotel, Saratoga Springs, N. Y.

GRIFFIN RENO, Bradford, Pa., died April 30, 1903.

JOHN N. RIPPEY, St. Paul, Minn.

EDWIN C. TAPPAN.

WILLIAM D. TOWNER.

JOHN L. VAN ALSTYNE, Binghamton, N. Y.

ALBERT VANDER VEER, Albany, N. Y.

SHERMAN W. WARD.

EDWARD C. WEBB.

S. P. WRIGHT, Wilmington, N. C.

A. M. YOUNG, Salem, N. Y.

CLASS OF 1872.

The members of the class of 1872 were:

ALMON S. ALLEN, New York City, died March 18, 1889.

J. EMERSON ALLEN, died Aug. 22, 1877.

GEORGE H. BENJAMIN.

JOSEPH H. BLATNER, Albany, N. Y.

JOSEPH BONTER.

S. TOWNSEND BOYNE, Leadville, Colo., died March 26, 1902.

FRANK M. BOYCE, East Schodack, N. Y.

H. H. CLAPSADDLE, Toddsville, N. Y., died June 29, 1907.

FRANK GARBUZZ, Mechanicville, N. Y.

EDWARD A. GREEN, Sharon Springs, N. Y., died Oct. 5, 1895.

JOHN HAYNES, Cohoes, N. Y., died March, 1906.

J. STEWART HILL, Elmira, N. Y.

CHARLES E. JONES, Albany, N. Y., died Dec., 1899.

J. WILTSIE KNAPP, Geddes, N. Y., died April 14, 1911.

GEORGE S. LA MOREE, Highland, N. Y.

WILLIAM E. MILBANK, Albany, N. Y.

JOHN H. MOON, E. Springfield, N. Y.

A. NELLIS, JR., Willard, N. Y., died Dec. 27, 1893.

PHILIP T. O'BRIEN, Clinton, Mass.

JESSE T. OWEN, Lodi, N. Y.

GEORGE A. PIERCE, Lebanon Springs, N. Y., died Jan. 23, 1890.

GEORGE RICE, Mechanicville, N. Y., died Jan. 12, 1894.

AUSTIN A. SNELL, died Nov. 25, 1875.

JOHN R. STURTEVANT, Theresa, N. Y.

NATHAN F. SWEATMAN, Amsterdam, N. Y., died Feb. 18, 1905.

CLASS OF 1882.

The members of the class of 1882 were:

- HIRAM C. ABRAMS, Newtonville, N. Y.
WILLIAM M. ARMSTRONG, Edinburgh, N. Y., died May 31, 1884.
HENRY D. BLANCHARD, Portlandville, N. Y.
RICHARD J. BROWN, Niagara Falls, N. Y.
FRANK V. BROWNELL, 28 Jay St., Schenectady, N. Y.
HARRY M. BURTCHE, died Feb. 12, 1896.
FRANK BURTON, Minneapolis, Minn.
CASSIUS P. BYINGTON, Cairo, N. Y.
CALVIN E. CARPENTER.
WILLIAM S. DEGOLIA, Crossville, Tenn., died Sept. 19, 1907.
WALLACE E. DIETZ, Albany, N. Y.
JAMES DORNET, Denver, Colo., died March 1, 1883.
BERNARD EAGAN, Cohoes, N. Y.
HENRY C. FINCH, Broadalbin, N. Y.
REYNALDO FITZGERALD, died August 18, 1906.
WILLIAM E. FOX, N. Hoosick, N. Y.
WILLARD GILLETTE, Roseboom, N. Y.
FRANK L. HARTER, Syracuse, N. Y.
D. CLINTON HAZEN, Lowell, Ill., died April, 1888.
WILLARD HILLEGAS, Chicago, Ill., died Sept. 21, 1910.
FRED HOLCOMB, Kensington, Ill., died March 28, 1891.
GEORGE J. HOLMES, New Britain, Conn., died Dec. 14, 1907.
GEORGE H. HOUGHTON, Albany, N. Y.
LEVI C. HUBBARD, died.
GEORGE HUDSON, Stillwater, N. Y.
WILLIAM KAMP, Belleville, Kan.
FRANK B. LOCKE, Colebrook, N. H.
GEORGE E. LYON, West Troy, N. Y.
JOHN W. MANN, Albany, N. Y., died Feb. 7, 1884.
EDWARD F. MARSH, Brooklyn, N. Y.
EDGAR E. MARYOTT, Coxsackie, N. Y., died Feb. 28, 1904.
WALTER B. MILLER, Millerton, N. Y.
ADAM MYERS, Buskirk's Bridge, Rens. Co., N. Y.
JAMES R. NEWTON, Scranton, Pa.
FRANK A. PALMER, Mechanicville, N. Y.
MILTON PARSONS.
WILLIAM J. PEDDIE, Fultonville, N. Y.
WILLIAM P. PLATNER, Germantown, N. Y.
HORACE R. POWELL, Poughkeepsie, N. Y.
FRED H. RAY, Helena, Mont.
JOSEPH W. RILEY, West Troy, N. Y.
ADDISON O. ROBERTS, Bath-on-Hudson, N. Y.
SIDNEY F. RODGERS, Troy, N. Y., died 1912.
WILLIAM B. SABIN, West Troy, N. Y.

ERNEST L. SAMPSON, Mexico, N. Y.
WALTER W. SCOFIELD, Dalton, Mass.
LEMON THOMSON, Glens Falls, N. Y.
THOMAS C. WALSH, Pulaski, N. Y.
ISAAC C. WASHBURN, Chatham, N. Y.
JOHN B. WASHBURNE, Delmar, N. Y.

REPORT OF THE HISTORIAN OF THE CLASS OF 1882.

Mr. President and Fellow Alumni:

It gives me much pleasure to present the report of the class of '82 on their thirtieth anniversary. Forty-nine members of the class received their diplomas from President Potter of Union University on the first day of March, 1882. Twelve have been called to their eternal rest after an honorable career in their profession. Thirty-three addresses are known and five unknown. I wrote to all whose addresses were known

The list of those who have died is as follows:

James T. Dornet, died March 1, 1883.
Wm. M. Armstrong, died May 31, 1884.
Joseph W. Riley, died Jan. 15, 1886.
John W. Mann, died March 4, 1888.
Daniel C. Hazen, died in April, 1888.
Fred Holcomb, died March 28, 1891.
Harry M. Burtch, died Feb. 12, 1896.
Wm. S. DeGolia, died Sept. 19, 1907.
Reynaldo J. Fitzgerald, died Aug. 18, 1906.
George J. Holmes, died Dec. 14, 1907.
Edgar E. Maryott, died Feb. 28, 1904.
Sydney F. Rogers, died March 6, 1912.
Milton Parsons, died.

The following are extracts from the letters received:

C. P. BYINGTON, Ossining, N. Y.:

Sorry cannot meet with class of '82 on May 14th. Is about starting on first real vacation in thirty years, taking an extended trip through the United States and Canada, to be away for several months, taking wife and daughter. His life has been as uneventful probably as that of the average professional man, barring a period of seven years from 1895 to 1902, during which was obliged to give up practice and make fight of his life to recover from Tuberculosis. He says, "it took seven years but I won." Is located at Ossining, N. Y., since 1902. Physician attending to Ossining Hospital, and no reason to find fault with the measure of prosperity which has come to him. Wishes his class-mates a happy time on May 14th.

W. E. DEITZ, Berne, N. Y.:

Expects to be present on May 14th and partake of all the joys and greetings that makes the day a happy one, also to look to each year

with renewed success. During past thirty years has had his share of hard work. Has wrestled with profit and loss all along the line, and has won out on the side of profit, with a fair saving at hand. Is married, no children, except a little grand-niece living with them.

H. C. FINCH, Broadalbin, N. Y.:

Says, his history for the past thirty years is a short one, is still practicing medicine in Broadalbin where he has been located for thirty years. Has had a very active practice among a splendid class of people, worked much harder than ever intended, and now that he has the pleasure of his son, Dr. Percy H. Finch, who graduated from the Albany Medical College in 1911, associated with him, and it is frequently rumored that Dr. Percy is having such splendid success that many prefer him to the "Old Doctor," which he accepts as a compliment to his Father and Alma Mater and begins to hope for easier days. Hopes to have the pleasure of meeting the class on May 14th.

Dr. WILLARD GILLETTE, Roseboom, N. Y.:

Would like very much to be present on the 14th, but will not be able on account of his work. For the first eighteen months of practice was at Starkville, N. Y. In the fall of 1883 came to present location and has had a busy practice since.

WILLIAM KAMP, Belleville, Kan.:

Would like very much to be present on the thirtieth anniversary, but will not be able to gratify that desire. Says his personal history would be uninteresting to the class, has done his share of work, had his share of honor and the average amount of "Cussing." Is still in practice and expects to as long as he can.

A. Y. MYERS, Buskirk's Bridge, N. Y.:

Hopes to be present on May 14th. Has been in present location twenty-nine years, has tried to do good honest work, has been his ambition to keep up with the march of progress made by the profession. His family consists of wife and two boys, Victor, the eldest, a graduate of Wesleyan and Yale, is now at the New York Post-Graduate teaching pathological chemistry. Ralph, the younger, is a graduate of Yale and is now at Harvard assisting in teaching physiology and is doing work for his degree of Ph.D. Does not know how long he shall do general work.

EDWARD F. MARSH, Brooklyn, N. Y.:

Has continued to follow the line of the general practitioner, although has a son who graduated in medicine three years ago, and is specializing in Dermatology and Urology. He practiced in Fulton, N. Y., for eleven years, then went to Brooklyn where he has since resided. While in Fulton served three years as Coroner and became President of the Oswego County Medical Society, of which he is now an honorary member. Was married before his graduation to Elma T. Randall, of Fair Dale, N. Y., and has two children. A son who follows his father's profession and a daughter who is a teacher. He is a member of the

American Medical Association, New York State Medical Society, King's County Medical Society, and Associated Physicians of Long Island. Has served as Master of Minerva Lodge, F. & A. M., and as District Deputy Grand Master, Third Masonic District, and President of the Past Masters Association. Is a member of the Royal Arcanum, and Medical Examiner of the same, and of several life insurance companies. Is a member of the First Reformed Church of Brooklyn. His health is good and hopes to be with us on Alumni Day.

WALTER B. MILLER, Millerton, N. Y.:

After graduation located in Herkimer county where he practiced until June, '91, then moved to Schenectady, there until the following December when he again moved to present location, purchased a home, and has had a good practice ever since. Has had four children—all daughters—one of whom—the eldest—died in January, 1907. In January, 1908, had that very fashionable(?) disease, Appendicitis, and was ill nine weeks, otherwise has enjoyed good health. Wishes to be remembered to all the members of the class of '82, and to the surviving members of the Faculty, especially to Dr. Albert Vander Veer, who was in the prime of his manhood when "we were boys," and who has so ably devoted his time and talents to the Science and Practice of Surgery.

FRANK A. PALMER, Mechanicville, N. Y.:

Born in Lee, Mass., 1858, where resided until 1874, then moved to Ilion, Herkimer county, N. Y. In 1878 commenced the study of medicine with Dr. E. M. Draper of Ilion. In 1879 entered Albany Medical College, registering with Dr. Wm. Hailes. Took three winter and spring courses, acting as assistant in Laboratory with Dr. Hailes. January, 1881, married Miss Nellie Like, on February 15, 1882, a son, Wm. Hailes Palmer, was born; he is now located in Providence, R. I., and is visiting physician to the Rhode Island Hospital. After graduation opened an office in Albany, remained a few months, then entered into partnership with Dr. James Ferguson at Glens Falls, N. Y., which not proving satisfactory was dissolved in November, 1882. In February, 1883, came to present location, and has been in active practice with the exception of a few months spent in New York and Philadelphia in post-graduate work. In 1885 a daughter, Edna Rose Palmer, was born. In 1901 wife died, two years later married Sarah L. Snyder in Chicago, Ill. Is engaged in general practice a good share of which is surgical. Is surgeon for the Boston & Maine and D. & H. railroad companies. Is health officer and member of State Department of Health. Is a Republican. Belongs to several fraternal organizations, the most prominent of which are the Masons and Odd Fellows. In the former organization took the York rite course and is a member of Apollo Commandery and Oriental Temple, Troy, N. Y. Is a member of the New York State Medical Society and Saratoga County Medical Society, in the latter has served a term as President and Vice-President, also a member of the American Medical Association.

HORACE R. PGWELL, Poughkeepsie, N. Y.:

Armed with my "right of way" about one month after graduation located at Housatonic, Mass., where remained until September of same year, then moved to Poughkeepsie, and hooked up his sign. Evidently it attracted little attention, for January 1, 1884, found him with \$89.75 collected during the preceding fifteen months with several parties not heard from. Was young and full of ambition, somewhat "mussed up" by disappointment, but remained because didn't have sufficient money to go. Three years after got trusted for a rig and about that time began to think was about to be what is termed a "leading practitioner," and was so far as work was concerned, "was willin," so were many patients. Was seven or eight years before really had anything like a "paying" practice. In 1892 was honored by election as President of our Alumni Association. Has been medical officer of a militia company, member of the Board of Education, during two years of which was President. Has been county physician and police surgeon, president of a fire company and member of several orders. In politics was for years a Republican, but is now an Independent. Does considerable life insurance work, twelve per cent. of income being from that source. In 1883 married Miss Champlin of Rensselaer, N. Y. Has one son and one daughter, the former a graduate of Amherst College and now on the staff of the *Army and Navy Journal* in New York, fond of military life and a corporal in the Seventh Regiment. He is unmarried. His daughter is married and resides in Poughkeepsie. He is happy and enjoys his work and trusts all of his fellow Alumni are as comfortably situated.

WALTER W. SCOFIELD, Dalton, Mass.:

Graduated from Albany Hospital September 15, 1883. Began practicing at Dalton, Mass., three days later. Married Miss Charlotte A. Wands of New Scotland, N. Y., January 29, 1884. One only child, Walter W. Scofield, Jr., was born February 15, 1885. Have continued practicing at Dalton to the present time. Am a member of Massachusetts State Medical Society and American Medical Association. President of Berkshire District Medical Association two years. President of Alumni Association Albany Medical College. Served as delegate to New York State Medical Society and to New York Medical Association. Trustee of Massachusetts State Hospital for Epileptics for ten years. Have prospered financially and have been able to take a trip abroad and help my son to graduate from Williams College and the Massachusetts Institute of Technology. Own my home, some other real estate and have enough laid by for age and infirmity.

WM. B. SABIN, Watervliet, N. Y.:

Is still in active practice, in good health, belongs to all the regular medical societies. Is a 32d degree Mason and Shriner. Has a wife and one daughter, and find this old world a pretty good one to live in.

FREDERICK H. RAY, Helena, Mont.:

Greeting to class of "'82," it is a long journey from the Rocky Mountains to the Hudson River, or I would gladly be present Alumni Day.

Answering your request for a "short history" of my thirty years' practice is easy. I have not been engaged in practice.

Soon after receiving Albany Medical College diploma I went to the University of Pennsylvania for Post-Graduate course, while thus occupied two offers came, one professional the other commercial, and the business offer appearing best I went to St. Louis, Mo. There, from '83 to '89, I had charge of the credit department of a large manufacturer. Then, responding to "call of the west," I went to Helena, Mont., just on the east slope of continental divide. Here for over ten years I was the overworked secretary of a large drug company. The next eight years as First Assistant and State Examiner I was in charge of examination of the State banks, also all State and County offices handling public funds; next was made Register of State Lands. Montana, the third largest State, has the good fortune to have been granted by the United States over five million (5,000,000) acres land for schools. As the Register is responsible for the sale, leasing, and proper accounting cash receipts of these lands I fully realize what "doing a land office business" means.

Though a young sparsely settled State, Montana is in civic matters fully up to, and in some respects ahead of, eastern States. Our State Board of Health is especially efficient, it and county boards operating under an excellent law. Among the first laws passed after became a State were those requiring physicians, dentists and pharmacists to pass satisfactory examinations before State Boards in order to practice.

On behalf of this virile cosmopolitan commonwealth I cordially invite you all to visit Montana. There is no rival abroad for our Yellowstone and Glacier National Parks; tourists praise Montana as surpassing Europe in scenic attractions; here the hunter can, in season, bag large and small game, the investor finds safer and more profitable opportunities than in the east, and those in quest of health find it.

GEORGE HUDSON, Stillwater, N. Y.:

Is in active practice. Has a wife and two daughters and enjoys good health.

GEORGE H. HOUGHTON, Albany, N. Y.:

It seems but a day since we were assembled together, struggling like unto beavers building their dam, for our credentials, which would permit us to go out in the world and strive to make a living for ourselves and those dependent upon us, and I assure you it has been no easy task on my part. After graduating I became connected with the Swinburne Dispensary. The grand old man who conducted said institution did all that was possible, and worked with an earnestness seldom observed, to further our interests and advance our ability to do good work. After serving four years in said institution I became connected with D. & H. and N. Y. C. & H. R. R. doing expert work for them for a period of over fifteen years. During the past ten years I have been working along inventive lines. That is, making tools for the coming and present gen-

eration of M.D.'s. I have invented a table for reducing dislocation of the hip and shoulder joints. I have also invented a device for correcting deformed feet in children, this device is so constructed that it is not necessary to use plaster of paris, or steel braces, and the child operated upon can move about three or four days after operation. The last and not least is a device constructed from aluminum that will absolutely hold and control a Colles fracture, and I say without hesitation bring about a normal result in every instance; age or sex makes no difference.

FRANK L. HARTER, Syracuse, N. Y.:

Graduated in 1882 with a lot of good fellows. Married in 1883 a mighty good girl. Have five children, three boys and two girls. Two boys married, and one has a daughter, making me a grand-dad. Practiced medicine from 1882 to 1891 at Parish, N. Y., my home town with reasonable success. Came to Syracuse, N. Y., in 1891, and have been here since. Am an instructor in clinical diagnosis in Syracuse University Medical College. Member of the staff of the Hospital of the Good Shepherd, and have been President of that body two terms. Member of the Syracuse Academy of Medicine, also a member of all central city masonic bodies, a 32d degree Mason and Knight Templar.

Respectfully submitted,

WILLIAM B. SABIN,

Historian.

REPORT OF THE HISTORIAN OF THE CLASS OF 1892.

At the last meeting of the Alumni Association of the Albany Medical College, the twentieth since our graduation, the following members of the class of 1892 were present: LeRoy Becker, Frederick J. Cox, George M. Fisher, Eugene J. Gallagher, John B. Grover, George S. Haswell, William G. Lewi, Howard E. Lomax and Leo. H. Neuman. We met and organized and elected Howard E. Lomax as President and William G. Lewi as Historian. General regret was expressed that the previously elected Historian had not made more of an effort to get the members of the class together at this, the twentieth anniversary of our graduation, and it is the earnest desire of your present Historian, a desire that will, I hope, meet with general co-operation, to make our twenty-fifth anniversary a notable occasion to the members of the class of '92. In the meantime we will be content, of necessity, with the meagre report of the class which follows. Forty-eight letters were sent to the members of the class; replies have been received from eleven, and these, with a roster of the class, will constitute this history.

Dr. P. JAMES FAGAN, 33 Macombs Place, New York City, writes: "I have been practicing medicine and surgery in New York—Harlem—; am married, have one child, a girl. Am connected with the Harlem Hospital. Am a member of the American Medical Association, the State and

county medical societies, the Harlem Medical Association, of New York City, and am a Blue Lodge Mason, Royal Arch and a Knight Templar."

Dr. JOHN B. GROVER, Peckville, Pa., says: "I had the pleasure of being present at the meeting at which you were elected Historian—after twenty years—: some hopes for Bryan yet, after only sixteen years! After graduation I spent the first summer at the New York Polyclinic. I first located in Kingston, Pa., where I collected the munificent sum of twenty dollars in four months of *hard work*; tiring of exceeding the "speed limit" there I came to my present location and have been very successful—have made considerable money, have a pleasant home, and best of all, a good wife."

Dr. ARTHUR C. HAGEDORN (Haggy), Gloversville, N. Y., writes that the past twenty years have been the shortest he has ever known. General practice with some minor surgery has occupied his time. In 1910 he spent six months at the University of Pennsylvania doing work in one of the branches of medicine that has most interested him, namely, Pediatrics. During vacation time he has gone to various places, among them being Bermuda, trips west for a taste of ranch life and Europe, but he prefers the woods. He married "the best girl ever"—so *he* says—there are others of us who think that maybe *we* got that particular girl—in 1893 and their only daughter graduates from High School this year. He says further, "I am well, happy and content. The boys are often in my thoughts and how I wish I might see them all once more! A few have gone on and more will follow, but we are left to sustain the standards of good old '92."

Dr. HOWARD E. LOMAX, 114 Jay Street, Albany, N. Y., writes: "After graduation located at New Baltimore, N. Y., where I remained until 1900. While there was health officer. Married in 1897. Have three children, one boy and two girls. In 1900 located in Albany. Am Lecturer and Demonstrator of Anatomy in the Albany Medical College and Chairman of Staff and Lecturer in Eastern New York School for Certified Nurses. Have a hobby on Masonry and am a Past Master. I still cling to the old pipe. Am happy, well pleased and satisfied."

Dr. WILLIAM G. LEWI, 296 Lark Street, Albany, N. Y., has this to say: "Immediately after graduation I started to practice medicine in Albany and have been there ever since. Was married in 1901 and have two boys, ten and eight years old. About eight years ago became interested in high frequency electricity and have devoted much of my time since then to its study and use, at the same time doing general medical work. To those of the class who have not responded to the letter recently sent I would say that I would like to have a complete and accurate record of every member of the class and would appreciate it if they would write and tell me about themselves. Would also like to have reprints of any and all articles written by any member of the class of 1892."

Dr. CHARLES R. SEYMOUR, Binghamton, N. Y., tells us that after graduation he located in Binghamton and has been there ever since. He married in 1896 and had one child, a boy. At the age of eight this child died and this misfortune was followed by a greater one when five months later he lost his wife. (My fellow members of the class will join with me in expressions of sympathy for Dr. Seymour in this great double bereavement.) He has been President of the Broome County Medical Society and attending physician to the Binghamton City Hospital for ten years. Is interested in politics and very active in the National Guard, being at present Captain of Battery C, 2nd Field Artillery, N. G. N. Y.

Dr. CLEMENT F. THEISEN, 172 Washington Avenue, Albany, writes: "After graduation spent a year in Roosevelt Hospital, New York City, and after that spent eighteen months, during 1893 and 1894, in the study of my specialty, diseases of the nose, throat and ear, in Vienna. Since 1895 have been practicing in Albany. Am married and have two children, a boy and girl. Am Clinical Professor of Diseases of the Nose and Throat in the Albany Medical College and hold the following hospital appointments: Attending Laryngologist and Rhinologist to St. Peter's Hospital and the Child's Hospital, and attending Laryngologist, Rhinologist and Otologist to the Albany Orphan Asylum. Member of the County, State and American Medical Associations and American Laryngological, Rhinological and Otological Society. Fellow of the American Laryngological Association."

Dr. LANSING VAN AUKEN, Watervliet, N. Y., says that he has not been making history and adds: "Have been practicing medicine here a little and preaching what I practice or rather trying to practice what I preach." On June 21st of this year the congregation of the First Presbyterian Church, of which Dr. Van Auken has been Pastor for twenty-five years, tendered a reception to him and presented him with a purse in recognition of his services.

Dr. LEROY BECKER, Cobleskill, N. Y., writes: "After graduating I practiced at Seward, N. Y., until October, 1892, when I moved to my present address. I married in April, 1895, and have one daughter. Have held the different offices in our County Medical Society, local health officer, president of the village and am at present postmaster, but in active practice and enjoying good health."

Dr. H. B. BURTON, 206 Harrison Street, Syracuse, N. Y., writes: "Have been in active practice since graduation. Am now located in Syracuse and doing very well."

Dr. PETER J. DERVEN, 157 Harvard Street, Dorchester, Mass., writes that after graduation he located in Marlborough, Mass., and practiced there for fourteen years. During the last ten years there he devoted himself to diseases of the Digestive Tract. Six years ago he went to his present location and is doing well. Is married and says that if any of the boys come that way they should surely look him up.

A complete roster of the class follows, which is as correct as present information allows. The Historian would thank anyone for correcting any errors.

- LEO F. ADT, 174 Washington Ave., Albany, N. Y.
PATRICK J. BARRETT, Tupper Lake, N. Y.
LEROY BECKER, Cobleskill, N. Y.
ROBERT W. BELL, Chatham, N. Y.
HENRY H. BRADLEY, 43 East Utica St., Buffalo, N. Y. (Letter returned.)
DONALD G. BUCHANAN, 1934 Fifth Ave., Troy, N. Y.
HENRY B. BURTON, 206 Harrison St., Syracuse, N. Y.
JOHN C. BROWN, 132 Jay St., Albany, N. Y.
FRED. B. CASEY, Mohawk, N. Y.
ALBERT C. COBB, Marion, Mass.
FREDERICK J. COX, 314 State Street, Albany, N. Y.
PETER J. DERVEN, 176 Harvard St., Dorchester, Mass.
BENNETT W. DEWER, Cooperstown, N. Y.
PETER J. FAGAN, 33 Macombs Place, New York City.
GEORGE M. FISHER, 230 Genesee St., Utica, N. Y.
EUGENE J. GALLAGHER, Yonkers, N. Y.
W. I. GOEWHEY, 325 Hamilton St., Albany, N. Y.
HOMER J. GRANT, 475 Virginia St., Buffalo, N. Y.
JOHN B. GROVER, Peckville, Pa.
ARTHUR C. HAGEDORN, Gloversville, N. Y.
GEORGE S. HASWELL, Watervliet, N. Y.
ROBERT A. HEENAN, Hudson Falls, N. Y.
STANTON HENDRICK, Oneonta, N. Y.
JOHN B. HULL, Williamstown, Mass.
FRANK A. HUESTED, Amsterdam, N. Y.
WILLIAM P. KELLY, Pittsfield, Mass.
WILLIAM G. LEWI, 296 Lark St., Albany, N. Y.
HOWARD E. LOMAX, 114 Jay St., Albany, N. Y.
CHARLES H. LOVELAND. (No address known.)
ELMER E. MARTIN, Oroville, Cal.
DUNCAN McNAB, JR., 890 River St., Troy, N. Y.
FREDERICK A. MEAD, Chicopee, Mass.
CHARLES B. MOSHER, Johnstown, N. Y.
LEO H. NEUMAN, 194 State St., Albany, N. Y.
HARRY S. PEARSE, Hippodrome Bldg., Cleveland, Ohio.
LAROSE RANCOUR, Round Lake, N. Y.
ELMER E. REICHARD, Averill Park, N. Y.
SMITH M. ROODS, Wilton, N. Y.
WALTER B. ROSSMAN, 285 Hamilton St., Albany, N. Y.
CHARLES R. SEYMOUR, Binghamton, N. Y.
WILLARD H. SWEET, Peekskill, N. Y.
DAVID L. TAYLOR, 220 West 21st St., New York City.

FRANKLIN S. TEMPLE. (No address known.)

CLEMENT F. THEISEN, 172 Washington Ave., Albany, N. Y.

LANSING VAN AUKEN, Watervliet, N. Y.

CLARENCE D. VROOMAN, Ellenville, N. Y.

FRANKLIN G. WARNER, Antoin, N. H. (Letter returned.)

ALFRED G. WILDING, Malone, N. Y.

FREDERICK A. WILLIAMS, 100 Boylston St., Boston, Mass.

Since the class of 1892 left their Alma Mater four of our number have passed to the Great Beyond.

CHAUNCEY A. PATTERSON, died on May 5, 1894, at Griffins Corners, N. Y.

WILLIAM A. LIDDLE, died August 1, 1895, at Amsterdam, N. Y.

CHARLES L. PARKER, died May 28, 1904, at Onondaga, N. Y.

BERT. L. GOLDTHWAITE, died on June 7, 1908.

CLASS OF 1902.

The members of the class of 1902 were:

LA SALLE ARCHAMBAULT, Albany, N. Y.

THOMAS CARNEY, Schenectady, N. Y.

ELWIN CHAMPLIN, Griffin Corners, N. Y.

KENT S. CLARK, Schenectady, N. Y.

JOHN B. CONGDON, Albany, N. Y.

HUGH M. COX, New York City.

EDWARD A. DAWSON, Brooklyn, N. Y.

AUGUST J. FREUTEL, Brooklyn, N. Y.

JOHN H. GUTMANN, Albany, N. Y.

STILLMAN S. HAM, Schenectady, N. Y.

DANIEL J. HOYT, Poughkeepsie, N. Y.

EARL H. JACKSON, Schenectady, N. Y.

ROBERT J. KAHN, New Rochelle, N. Y.

FRED H. LADD, Canton, N. Y.

FRED E. LETTICE, Ossining, N. Y.

MOSES J. MANDELBaUM, New York City.

JOSEPH MARK, New York City.

EDWAIN A. MASON, Melrose, N. Y.

HENRY E. MERENESS, JR., Albany, N. Y.

FRED C. REED, Schenectady, N. Y.

FRANK M. SULZMAN, Troy, N. Y.

CLIFFORD W. SUMNER, North Granville, N. Y.

JUNIUS P. TALMADGE, Brooklyn, N. Y.

ELBERT G. VAN ORSDELL, died March 25, 1911, Brooklyn, N. Y.

CHARLES P. WAGNER, St. Johnsburg, N. Y.

GEORGE V. WARNER, Fairhaven, N. J.

RICHARD A. WOODRUFF.

HISTORY OF THE CLASS OF 1902.

Of the twenty-five men graduated in 1902 all except one are in the land of the living. We have heard from all of the members of the class directly or indirectly, and are glad to be able to report that, almost invariably, the story is one of success and contentment.

LA SALLE ARCHAMBAULT. After graduation spent three years in Europe and devoted most of the time to neurological clinics and to original researches in anatomy and pathology of the nervous system. Upon returning, was placed in charge of the department of neuropathology at the Bender Laboratory, and since then has had the honor of being successively Instructor and Lecturer at the Albany Medical College. Practice limited to diseases of the nervous system. Is a member of the Medical Society of the County of Albany, of the State Society, American Medical Association, American Neurological Association and of the Société de Neurologie of Paris.

THOMAS CARNEY entered private practice in Schenectady and may still be found there. He is Major of the Third New York Infantry and seems ambitious to show the fighting qualities of his men against a foreign foe. Carney is enjoying good health and a healthy practice.

ELWIN CHAMPLIN is busy taking care of a fairly large family and a very large practice in Griffin Corners, N. Y.

KENT S. CLARK is in active practice in Schenectady, N. Y. Clark's general demeanor indicates that "has no kick coming."

JOHN B. CONGDON. After graduation entered the Albany Homeopathic Hospital as interne. He located in Albany and is quite satisfied with his ten years' work. He is attending physician in the Homeopathic Hospital and surgeon and gynecologist to the Homeopathic Hospital Dispensary.

HUGH M. COX. After a year in Troy Hospital located in New York City. In 1903 entered the Post-Graduate Medical School as assistant in the Nervous and Mental Department. Was later made assistant attending neurologist in the clinic and instructor in the school. Now assistant attending gynecologist in the Woman's Hospital Clinic and confining practice largely to gynecology. Is a member of the American Medical Association, New York County and State Medical Societies, Harlem Medical Society and Physicians' Mutual Aid. For past seven years lecturer for the First Aid Society of New York.

EDWARD A. DAWSON located in Brooklyn where he is doing special work upon the nose and throat. He has several hospital appointments and a lucrative practice. His work is unhindered by wife or child—he is still a bachelor.

AUGUST J. FREUTEL served a year in Fordham Hospital, began practice in New York City in the latter part of 1903 and now has a successful and prosperous practice. Has good health but no wife. He is a

member of the American Medical Association, New York County Medical Society, Bronx Medical Association, and is Past Master of Lodge 714, F. & A. M.

JOHN H. GUTMANN. One year interne service Albany Hospital. Associated four years with Dr. Willis G. Macdonald in the practice of surgery. Have been assistant attending surgeon Albany Hospital. Visiting surgeon South End Dispensary. Lecturer in surgery Albany Medical College.

S. S. HAM is among the several men who located in Schenectady. He is attending physician to Child's Home and Child's Dispensary. Ham appears as though prosperity smiled upon him and, surely, practice is agreeing with his health.

E. H. JACKSON. Located in Schenectady June 26, 1902, and is still in general practice. Married in 1903 and is the happy father of two sons and a daughter. Has enjoyed a prosperous practice and meddled some in politics. Is now serving his third year as coroner of Schenectady County.

ROBERT J. KAHN writes as follows: "I have attended most of the Alumni days since our graduation, at all of which the majority of the members of our class were conspicuous by their absence. I have, therefore, looked forward to the reunion year with much anticipated delight in the hope of once more meeting the men who were with me for many weeks of pleasant memory. But it cannot be! Matters of more than ordinary importance demand my attention elsewhere. Will you, for me, give my regards and best wishes to all of 'the Boys?' I send congratulations to those who have succeeded in doing much and prophesies of success to those who have failed to reach the goal of their ambition, if there be any such; and I hope there are not. . . . Until last spring I spent the most of each year quietly 'buried' in Spuyten Duyvil, enjoying myself in purely rustic pleasures, and the balance of the year was spent in travel either in this country or abroad. Last spring I bought a place at New Rochelle where I expect to end my days. You will find no nameplate on the door and a pay patient has never crossed the threshold, but any or all of my Albany friends will find the latch-string out. On the eve of the fourteenth I shall silently and alone drink to the health of Albany Medical College and to all of you."

FRED. H. LADD. No reply to letter. Ladd is in general practice in Canton, N. Y.

FRED. LETTICE. No reply to letter. Lettice is said to be practicing in Reno, Nevada.

M. J. MANDELBAUM. No reply. Mandelbaum entered the Albany Hospital after graduation and, later, entered practice in New York City, where he is still located.

JOSEPH MARK. No reply. Mark has practiced in New York since leaving college.

EDWIN A. MASON. Immediately after graduation accepted an appointment as interne in St. Peter's Hospital, Albany, N. Y., at which place I remained for a year. Practiced in Grafton, N. Y., for about a year and then removed to Raymertown, Rens. Co., N. Y., July 17, 1904. Am still engaged in practice in the latter place.

HARRY E. MERENESS. No reply. Is physician to Sing Sing Prison and is living in New York City.

WILLIS E. MERRIMAN is, at present, absent in Europe. He has been in the State service most of the time since leaving college and is now connected with the Hudson River State Hospital at Poughkeepsie.

FRED C. REED is prospering in Schenectady. He is in general practice and has been given his share of the good things of life.

FRANK M. SULZMAN. After graduation served as interne at Troy Hospital. On the completion of his service there did special work in New York, Philadelphia and Baltimore, being associated with the work in Dr. Callan's clinic at the New York Eye and Ear Infirmary. Located at Troy N. Y., and has been attending rhinologist and laryngoloist to St. Joseph's Maternity Hospital and Cohoes Hospital; attending ophthalmologist to Troy Dispensary and Cohoes Hospital and St. Coleman's Home. Still continues the work at the New York Eye and Ear Infirmary. Married in 1905 and two sons and one daughter take up his spare time.

C. W. SUMNER. Located in North Granville, N. Y., in September, 1902. Has been there since graduation doing general work and raising babies. He has been tremendously successful in both lines. Sumner expected to have been present at the reunion but was prevented, evidently, by the babies or the practice.

J. PARKER TALMADGE. Spent two years after graduation in the Nassau Hospital, Mineola, L. I. Was appointed assistant superintendent of the Long Island College Hospital, Brooklyn, N. Y., after leaving the Nassau Hospital, and is still in this position. Talmadge was married during the past year. He fully intended being present at the reunion of the class but was prevented by unforeseen circumstances.

E. G. VAN ORSELL. Died in Brooklyn, N. Y., March 11, 1911. He was enjoying a large general practice in Brooklyn and the future seemed full of promise but death overtook him as stated.

CHARLES P. WAGNER. Not heard from. Wagner, after graduation, was appointed interne at the Samaritan Hospital, Troy, N. Y., where he spent a year. He is now doing general work at St. Johnsville, Rens. Co., N. Y.

The following communication from Dr. Hamblin B. Maben, an ex-president of the Association, was then received and ordered entered upon the minutes:

KINGSTON, N. Y., May 11, 1912.

J. M. MOSHER, M.D.:

Dear Doctor.—I received the five copies of the ALBANY MEDICAL ANNALS and am greatly pleased with the memoriam notice of the late Dr. E. M. Draper, for which I thank you very much. I am sending a copy to his widow and a few of his special friends.

I have not been able to attend the Alumni meeting since 1907, the fiftieth anniversary of my graduation, and the thirty-fourth meeting of the Alumni Association; I have always felt a deep interest in its success; I was a charter member, so to speak, and present at the organization, and have attended many of its meetings since.

I have ever been loyal to the old Albany Medical College, having sent the following students from my own office: N. B. Fairchild, Charles B. Tefft, A. D. Wheelock, Wm. H. Brown, E. M. Draper, George King, Robert W. Warner, Julian A. Gaul. All of whom have made successful practitioners and an honor to the profession. All of whom are now living except A. D. Wheelock, Wm. H. Brown, and the late E. M. Draper.

I had hoped to be present at the next reunion and banquet next Tuesday, but owing to my advanced age and a recent cold and weakened condition I do not now feel that it would be prudent or even safe for me to make the effort to do so. Trusting that the attendance may be large and the whole affair a grand success, I remain as ever loyal to the Association of the Albany Medical College.

Fraternally and most sincerely yours,

H. B. MABEN, '57.

The Nominating Committee submitted the following report by its chairman, Dr. Tucker:

For President

Dr. ARTHUR G. ROOT ('90), Albany, N. Y.

For Vice-Presidents

Dr. CHARLES A. INGRAHAM ('78), Cambridge, N. Y.

Dr. ADAM Y. MYERS ('82), Buskirk's Bridge, N. Y.

Dr. FRANK S. SNOW ('89), Hartford, Conn.

Dr. GEORGE S. HASWELL ('92), Watervliet, N. Y.

Dr. FRANK M. BOYCE ('72), East Schodack, N. Y.

For Recording Secretary

Dr. J. MONTGOMERY MOSHER ('89), Albany, N. Y.

For Corresponding Secretary

Dr. JAMES N. VANDER VEER ('03), Albany, N. Y.

For Treasurer

Dr. ROBERT BABCOCK ('84), Albany, N. Y.

For Historian

Dr. ARTHUR J. BEDELL ('01), Albany, N. Y.

For Members of the Executive Committee (term three years)

Dr. JOHN ARCHIBOLD ('88), Cohoes, N. Y.

Dr. WILLIAM G. LEWI ('92), Albany, N. Y.

Dr. BRANSEN K. DEVOE ('04), East Greenbush, N. Y.

Dr. MALCOLM DOUGLASS ('04), Albany, N. Y.

For Member of the Executive Committee to Fill Vacancy

Dr. JOSEPH L. BENDELL ('07), Albany, N. Y.

On motion of Dr. Lipes, the report was accepted and the Recording Secretary was directed to cast one ballot for the names contained in the report. The Recording Secretary then read these names and Vice-President Van Loon declared the members named in the report duly elected officers of the Association for their respective terms.

Announcements of the program of the day, the commencement exercises and alumni dinner having been made, and no further business appearing, the Association adjourned.

COMMENCEMENT EXERCISES

The eighty-first commencement exercises of the Albany Medical College were held at Odd Fellows' Hall, on Tuesday afternoon, May 14, 1912, at three o'clock, in the presence of a large audience. Samuel B. Ward, M. D., Dean of the College, presided, and upon the stage were seated the members of the Faculty, officers of the Alumni Association and prominent citizens.

The following was the

ORDER OF EXERCISES

DEAN SAMUEL B. WARD, M. D., PRESIDING.

Music—Selection, "The Pink Lady".....*Caryll*

Prayer.....*REV. JAMES S. KITTELL, D.D.*

Music—Intermezzo, "In the Shadows".....*Finck*

- Essay*.....PAUL PATTENGILL GREGORY
Music—Morceau, "Humoreske"Dvorak
 PRESENTATION OF CANDIDATES FOR DEGREE BY DEAN WARD.

CONFERRING DEGREES

BY CHARLES ALEXANDER RICHMOND, D.D., LL.D.,
 Chancellor of the University.

- Music*—Morceau de Gavotte, "Eglantine".....*Clothilde*

ADDRESS TO THE GRADUATING CLASS
 HON. THOMAS F. CONWAY.

- Music*—Serenade, "The Blushing Rose".....*Johnson*
Valedictory.....WILLIAM HENRY SEWARD

REPORT ON PRIZES AND APPOINTMENTS
 JOSEPH D. CRAIG, M. D.

- Music*—Finale, "The Gaby Glide".....*Hirsch*
 (HOLDING'S ORCHESTRA.)

The Graduating Class was as follows:

Max Alonzo Almy.....	Corning, N. Y.
Horace Edward Auringer.....	Cohoes, N. Y.
Bertram Truman Baker.....	Warrensburg, N. Y.
Clifton Bogardus	Catskill, N. Y.
John Lawrence Both.....	Albany, N. Y.
Joseph Henry Bowers.....	Albany, N. Y.
John Joseph Cahill.....	Hudson Falls, N. Y.
Alton Brooks Daley.....	Coxsackie, N. Y.
Sol Charles Davidson.....	Rochester, N. Y.
John Lounsbury Edwards.....	Randall, N. Y.
George Augustine Green.....	Mechanicville, N. Y.
Paul Pattengill Gregory.....	Mt. Vision, N. Y.
Walter Robert Grunewald.....	Gloversville, N. Y.
John Duncan Gulick.....	Cranbury, N. J.
Vasileos Michael Koundourianes, B.A.....	Albany, N. Y.
Royal Estabrook La Grange.....	Glens Falls, N. Y.
Albert Lenz	Johnstown, N. Y.
Norman Howe Liberty.....	Ticonderoga, N. Y.
Charles Immanuel Loeble.....	Troy, N. Y.
William Edgar Low, Jr.....	Catskill, N. Y.
Donald Angus MacDuffie.....	Olean, N. Y.
Domenico Carlantonio Mauro.....	Gloversville, N. Y.
Joseph Ambrose McPhillips.....	The Glen, N. Y.
Ward Winthrop Millias, Ph.B.....	Castleton, N. Y.
James Henry Mitchell, Jr.....	Cohoes, N. Y.
Floyd Hazard Moore.....	Herkimer, N. Y.
Clarence Edmond Mullens.....	Albany, N. Y.

Homer Hollett Oaksford.....	Gloversville, N. Y.
Daniel Francis O'Keeffe.....	Hadley, N. Y.
Daniel Tobias Read.....	Charleston, S. C.
Fred Lester Ritter.....	Albany, N. Y.
Michael Augustine Rogers.....	Schuylerville, N. Y.
William Henry Seward.....	Amsterdam, N. Y.
George Aaron Sharp.....	Westfield, Mass.
Arthur Henry Stein, B.S.....	Albany, N. Y.
Charles Edward Stott.....	Albany, N. Y.
Sterling Wallace Todd.....	Hyde Park, N. Y.
William Trotter	Troy, N. Y.
Floyd Alberti Weed.....	Catskill, N. Y.
Jerry West	Gallupville, N. Y.
Arthur Hastings Wheeler.....	Troy, N. Y.
Ira Condict Whitehead, Jr.....	Albany, N. Y.
and	
Clayton Longueville Gifford.....	Valley Falls, N. Y.,
	who will receive his diploma September 16, 1912.

Dr. Craig presented the prizes. He read a report on the Vander Poel prize, endowed by Mrs. Gertrude W. Vander Poel, in memory of her husband, the late S. Oakley Vander Poel, for many years a professor in the college, stating that the prize, consisting of a clinical microscope and accessories, offered to the senior student passing the best bedside examination in general medicine, has been awarded to Dr. John Lounsherry Edwards, with honorable mention of Dr. John Lawrence Both.

The prize offered by Drs. Vander Veer and Elting for the best report of the surgical clinics was awarded to Dr. Ward Winthrop Millias. For the second best report of these clinics, the prize offered by Drs. Morrow and Traver was awarded to Dr. Donald Angus MacDuffie.

The prize, consisting of an ophthalmoscope, offered by Dr. Merrill for the best final examination in ophthalmology, was awarded to Dr. William Henry Seward.

The Townsend Physiological prize endowed by the late Professor Franklin Townsend, Jr., M. D., was awarded to Mr. Martin A. Murphy, for passing the best examination in physiology at the end of the first year of study.

Dr. Boyd's prize to the student passing the best final examination in obstetrics was awarded to Dr. William Henry Seward.

The prize, consisting of a case of surgical instruments, offered

to the senior student passing the best final examination, by Dr. W. J. Nellis ('79), in memory of his brother the late Dr. T. W. Nellis ('81), was awarded to Dr. William Henry Seward.

The Daggett prize, consisting of sixty dollars, for the best "anatomical specimens," was awarded to Mr. John Waluk, and the Daggett prize, consisting of thirty dollars, for the second best "anatomical specimens," was awarded to Mr. Edwin H. Huntington.

The Daggett first prize for the best "deportment irrespective of scholarship," consisting of sixty dollars, was awarded to Dr. John Duncan Gulick, and the second prize, consisting of thirty dollars, was awarded to Dr. Domenico Carlantonio Mauro.

Appointed Essayist for 1913, Ray Holly Humphry.

A prize, consisting of a Thoma hemacytometer, offered by Dr. A. J. Bedell, for the best report of the eye and ear clinics, was awarded to Dr. Horace Edward Auringer.

The following hospital and laboratory appointments were announced:

Albany Hospital: John Lounsbury Edwards, Ward Winthrop Millias, Floyd Alberti Weed, Max Alonzo Almy, Daniel Francis O'Keeffe, Donald Angus McDuffie, C. H. Pelton, Royal Estabrook La Grange.

St. Peter's Hospital: Arthur Henry Stein, William Edgar Low, Jr., John Lawrence Both, Joseph Henry Bowers.

Samaritan Hospital, Troy: Michael Augustine Rogers, Paul Pattengill Gregory, William Trotter.

Troy Hospital: Norman Howe Liberty, Bertram Truman Baker, Domenico Carlantonio Mauro, Alton Brooks Daley.

Ellis Hospital, Schenectady: George Aaron Sharp, James Henry Mitchell, Jr., Albert Lenz.

Cohoes Hospital: Walter Robert Grunwald.

Pittsburgh Hospital, Pennsylvania: Clifton Bogardus.

Homeopathic Hospital, Albany: Clarence Edmond Mullens, Sterling Wallace Todd, Daniel Tobias Read, Charles Immanuel Loebel.

Glens Falls Hospital: Horace Edward Auringer.

Gouverneur Hospital, New York: William Henry Seward.

Metropolitan Hospital, New York: John Joseph Cahill, Joseph Ambrose McPhillips.

Nathan Littauer Hospital, Gloversville: Homer Hollett Oaksford.

Methodist Episcopal Hospital, Brooklyn: Floyd Hazard Moore.

Jersey City Hospital, Jersey City: Sol Charles Davidson.

Physicians' Hospital, Schenectady: Jerry West.

St. Elizabeth's Hospital, Utica: Arthur Hastings Wheeler.

THE ALUMNI DINNER.

The thirty-ninth annual dinner of the Alumni Association was held at the "Ten Eyck," on Tuesday evening, May 14, 1912, at nine o'clock. About one hundred were present, including members of the Association, the guests, and members of the graduating class.

Dean Samuel B. Ward acted as toastmaster and addresses were given by Chancellor Raymond, Lieutenant-Governor Thomas F. Conway, Rev. Alexander H. Abbott, Hon. H. L. Austin, Dr. Albert Vander Veer and Dr. Clarence E. Mullens.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH — ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS — JUNE, 1912.

Deaths.

Consumption	15
Typhoid fever	0
Scarlet fever	0
Measles	0
Whooping-cough	2
Diphtheria and croup.	3
Grippe	1
Diarrheal diseases	6
Pneumonia.	3
Broncho-pneumonia	2
Bright's disease	14
Apoplexy	7
Cancer.	11
Accidents and violence.	17
Deaths over seventy years.	28
Deaths under one year.	23
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Total deaths	144
Death rate	17.51
Death rate less non-residents.	14.34

Deaths in Institutions.

	Non- Resident.	Resident.
Albany Hospital	8	8
Albany Orphan Asylum.....	0	0
Child's Hospital	0	0
County House	5	5
Home for the Friendless.....	0	0
Homeopathic Hospital	2	4
Hospital for Incurables.....	0	1
House of Good Shepherd.....	0	0
Little Sisters of the Poor.....	0	0
Public places	2	4
Penitentiary .. .	0	0
St. Margaret's House.....	2	1
St. Peter's Hospital.....	4	3
Austin Maternity Hospital.....	3	1
Albany Hospital, Tuberculosis Pavilion.....	3	1
Labor Pavilion	0	0
Totals	29	28
Births	183	
Still births	7	
Premature births	6	

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	0
Scarlet fever	0
Diphtheria and croup.....	15
Chickenpox .. .	6
Measles.	42
Whooping-cough	5
Consumption.	34
Total.....	102

Contagious Disease in Relation to Public Schools.

Reported. Deaths.
D. S. F. D. S. F.

Public School No. 20.....	I
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Number of days quarantine for diphtheria:

Longest..... 17 Shortest..... 7 Average..... 11 6/9

Number of days quarantine for scarlet fever:

None.

Fumigations:

Houses.....	33	Rooms.....	131
Cases of diphtheria reported.....			15
Cases of diphtheria in which antitoxin was used.....			15
Cases of diphtheria in which antitoxin was not used.....			0
Deaths after use of antitoxin.....			3

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive.		13
Negative.		17
Failed.		0

Total.....		30
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Living cases on record June 1, 1912.....		391
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Cases reported during June:

By card		31
Dead cases by certificate.....		3
		—

34

—

425

Dead cases previously reported.....		12
Dead cases not previously reported.....		3
Duplicates.		4
Lost track of.....		17
Recovered.		13
Removed		14
Died out of town.....		3
		—

66

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Living cases on record July 1, 1912.....		359
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Total tuberculosis death certificates filed during June.....		15
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Out of town cases dying in Albany:		
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Albany Hospital Camp.....		1
		—

—

Net city tuberculosis deaths.....		14
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REPORT OF VISITING TUBERCULOSIS NURSE.

Total number of cases investigated.....		18
Dead cases		2
Left city		1
Cases cured		1
Out of town for summer.....		3
Cases referred to Albany Guild Tuberculosis Nurse.....		6
At Albany Hospital Camp.....		5
		—

18

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	19
Initial negative	64
Release positive	12
Release negative	69
Failed	16
 Total.....	 180

Test of sputum for tuberculosis:

Initial positive	15
Initial negative	24
Failed	4
 Total.....	 43

BUREAU OF MARKETS AND MILK.

Market reinspections	79
Public market inspections.....	22
Fish market inspections.....	2
Fish peddler inspections.....	0
Rendering establishment inspections.....	1
Slaughter house inspections.....	3
Milk inspections	48
Butter fats below 3%.....	0
Butter fats from 3% to 3.5%.....	7
Butter fats from 3.5% to 4%.....	40
Butter fats over 4%.....	1
Solids under 12%.....	5
Solids from 12% to 12.5%.....	8
Solids from 12.5% to 13%.....	22
Solids over 13%.....	13

MISCELLANEOUS.

Mercantile certificates issued to children.....	46
Factory certificates issued to children.....	20
Children's birth records on file.....	66
Number of written complaints of nuisances.....	69
Privy vaults	9
Closets	4
Plumbing	21
Other miscellaneous complaints.....	35
Cases assigned to health physicians.....	59
Calls made	109

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING—STATISTICS FOR JUNE, 1912.—Number of new cases, 129; classified as follows: Dispensary patients receiving home care, 13; district cases reported by health physicians, 0; charity cases reported by other physicians, 39; moderate income patients, 63; metropolitan patients, 14; old cases still under treatment, 86; total number of cases under nursing care during month, 215. Classification of diseases for the new cases: Medical, 34; surgical, 5; gynecological, 4; obstetrical under professional care, mothers 42, infants 41; infectious diseases in the medical list, 3. Disposition: Removed to hospitals, 20; deaths, 10; discharged cured, 76; improved, 10; unimproved, 8; number of patients still remaining under care, 91.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 2; nurses in attendance, 2; patients carried over from last month, 2; new patients during month, 2; patients discharged, 4; visits by head obstetrician, 0; visits by attending obstetrician, 0; visits by students, 26; visits by nurses, 41; total number of visits for this department, 67.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,011; for professional supervision of convalescents, 358; total number of visits, 1,369; cases reported to the Guild by no health physicians and forty-one other physicians; graduate nurses 7, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 55; new patients, 69; old patients, 187; total number of patients treated during month, 256. Classification of clinics held: Surgical, 7; nose and throat, 6; eye and ear, 7; skin and genito-urinary, 4; medical, 10; lung, 6; dental, 0; nervous, 2; stomach, 0; children, 10; gynecological, 3.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—A special meeting of the Medical Society of the County of Albany was held in the Library of the Albany Medical College on Wednesday, July 10, 1912, at five o'clock and action taken on the death of Dr. William Hailes of Albany.

DEPORTATION OF ALIEN INSANE.—Testimony is being taken before the committee appointed by the bureau of deportation to investigate conditions on Ellis Island for the care of alien insane. All the alienists who have testified thus far have virtually agreed that the provisions for the detection and detention of insane persons at Ellis Island are inadequate. They also favor foreign port examination and the presence on ships of one or more trained alienists. It is stated that under present conditions, scarcely ten per cent. of the aliens suffering from various forms of insanity can be detected. Dr. W. B. Mosely of Bellevue Hospital testified

that about 3,500 patients are admitted to the psychopathic ward of that hospital annually and that many of these are aliens. Dr. Fritz Fischerauer, vice-consul for Austria-Hungary, told of the regulations of his country regarding immigrants. He said that steamship companies were not allowed to canvass for immigrants and were held to a strict account for the class of persons that they transported by a rigid system of fines.

GUARDING AGAINST BUBONIC PLAGUE.—After a conference with Surgeon-General Blue of the United States Public Health and Marine-Hospital Service and his advisory board, Dr. Joseph O'Connell, health officer of the port of New York, has issued an order compelling all vessels entering the port to show certificates that their holds have been fumigated before lading in the last port of departure for the purpose of exterminating plague-infected rats and vermin. This order is to apply to vessels coming from all South American ports, Trinidad, Africa, Asia and European Turkey.

HOW TO CONDUCT AN ANTI-FLY CAMPAIGN.—One intelligent and energetic person can start a successful movement for the extermination of the house-fly in any community, if he or she is resourceful and patient as well. The general public is much more awake to the dangers of the fly pest than it was a few years ago, and needs only to have the subject kept before it to be ready and anxious to help in the solution of the fly problem.

The literature of the Fly-Fighting Committee will be sent to any person or organization making application for it with a view to beginning a local campaign. While this printed matter will be of service as furnishing ammunition in the way of information and argument, it is not sufficient merely to distribute it. The individual reformer must interest local organizations to co-operate with him in bearing the expenses of such forms of anti-fly propaganda as public lectures, stereopticon and moving picture exhibitions, posters and other forms of publicity. The newspapers are always ready to engage in the campaign if the campaigners will give them literature and if they "will do things" to the fly which will make news items for the papers. Such news items are furnished when the campaigners ask the Board of Health, if it has not already done so, to frame fly ordinances; when civic organizations, women's clubs, granges and churches hold meetings to discuss the fly pest.

AMERICAN MEDICINE GOLD MEDAL AWARD.—The Trustees of the American Medicine Gold Medal Award respectfully announce that the medal for nineteen hundred and twelve has been conferred upon Doctor William C. Gorgas, Ancon, Panama, as the American physician who in their judgment has performed the most conspicuous and noteworthy service in the domain of medicine during the past year.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—Nearly 4,000 additional hospital beds for consumptives in twenty-

nine states were provided during the year ending June 1st, according to a statement issued from the records of the National Association for the Study and Prevention of Tuberculosis. This makes a total of over 30,000 beds, but only about one for every ten indigent tuberculosis patients in this country.

In the last five years, the hospital provision for consumptives has increased from 30,000 in 1912, or over 100 per cent. New York State leads in the number of beds, having 8,350 on June 1st; Massachusetts comes next with 2,800; and Pennsylvania a close third with 2,700. Alabama showed the greatest percentage of increase in the last year by adding 57 new beds to its 42 a year ago. Georgia comes next with 100 beds added to 240 a year ago. New York has the greatest numerical increase, having provided over 1,800 additional beds in the year.

Only four states, Mississippi, Nevada, Utah and Wyoming, have no beds whatever in special hospitals or wards for consumptives. Eight years ago, when the National Association was organized, there were twenty-six states in which no hospital or sanatorium provision for consumptives existed and the entire number of beds in the United States was only 10,000.

"While these figures would indicate a remarkable growth in anti-tuberculosis activity," says Dr. Livingston Farrand, executive secretary of the National Association, in commenting on this subject, "there are still practically ten indigent consumptives for every one of the 30,000 beds, including those for pay patients. In other words, we have from 250,000 to 300,000 consumptives in this country too poor to provide hospital care for themselves. If tuberculosis is ever going to be stamped out in the United States, more hospital provision for these foci of infection must be provided."

UNITE TO TEACH SEX HYGIENE.—The American Federation of Sex Hygiene was incorporated with the Secretary of State, on July 1, to operate throughout the country. Its purpose is the voluntary education of the public in the physiology and hygiene of sex, including the study and application of every means, educational, sanitary, moral and legislative, for the prevention of vice and its diseases. The principal office of the corporation will be located in New York City.

AMERICAN ASSOCIATION OF CLINICAL RESEARCH.—The fourth annual meeting of the American Association of Clinical Research will be held in New York City, at the Academy of Medicine, on November 9, 1912.

The sessions will be held from 9 A. M. to 1 P. M., from 3 P. M. to 6 P. M., and from 8 P. M. to 10 P. M. The evening session will be opened to the public.

DIED.—Dr. WILLIAM HAILES (A. M. C. '70), attending surgeon to the Albany and St. Peter's Hospitals and emeritus professor of pathological anatomy and histology in the Albany Medical College, died at his home after a short illness on July 6, aged 62.

—Dr. JOHN K. THORNE (A. M. C. '71), one of the best known of the oldest practitioners of Gloversville and Fulton County, died July 7, aged 70 years. He had been in gradually failing health for several years and about eight months ago was compelled to give up his active practice after forty years of activity.

—Dr. HENRY DELOS BLANCHARD (A. M. C. '82), of Portlandville, N. Y., formerly secretary, treasurer and president of the Otsego County Medical Society, died suddenly in a restaurant in Oneonta, June 26, from fatty degeneration of the heart, aged 57.

—Dr. EDWARD L. GAUS (A. M. C. '97), also a graduate of the Albany College of Pharmacy and the Cornell Medical School, died at his home, Albany, N. Y., June 29, aged 44.

In Memoriam

EDWARD L. GAUS, M. D.

Dr. EDWARD L. GAUS, son of the late Charles H. Gaus, former State comptroller and former mayor of Albany, died at his home, 185 Lark street, Albany, N. Y., June 29, 1912, after a long illness. His mother, Mrs. Charles H. Gaus, and a sister, Mrs. Charles Russell, of Albany, survive him.

Dr. Gaus was forty-four years of age, and in addition to having been a licensed practitioner of medicine, was also a licensed pharmacist. He was a graduate of the Albany Medical College, of the class of 1897, the Albany College of Pharmacy and the Cornell Medical College.

PIERCE J. O'BRIEN, M. D.

PIERCE J. O'BRIEN of the class of 1898 of the Albany Medical College, died at his home, 2153 Seventh avenue, Troy, N. Y., May 26, 1912. At that time two internes did the intra mural work of that institution schools of Troy and graduated from La Salle Institute in 1895 after which graduation he entered upon the study of medicine. His jovial manner and spirit of bon comraderie soon endeared him to his fellow students. He graduated in medicine at Albany in the class of 1898. After receiving his degree he entered the Troy Hospital as an interne. At that time two internes did the intra-mural work of that institution and he found much work before him. But he was faithful and diligent and performed well the duties required of him. He entered into practice in the city of Troy after leaving the hospital and when the Spanish-American War broke out he entered the service and was attached to the 2nd Regiment Hospital Corps. Subsequently he served as surgeon of Company C, 2nd Regiment, and afterwards was promoted to a captaincy in the Hospital Corps. He resigned several years ago on account of failing health. At one time he was captain of the Ranken Steamer

Company and he was much beloved because of his cheerfulness and generosity and his fund of anecdotes always made him a welcome member of any coterie. The illness which affected him after the Spanish-American War made further inroads upon him, so that he at last gave up his practice. After a prolonged illness he died at the family residence in Troy, being survived by his mother, sister and two brothers.

W. J. K.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Manuel Pratique de Kinésithérapie. Fascicule I. F. WETTERWALD, Le rôle thérapeutique du mouvement, Nations générales. E. ZANDER, JR., Maladies de la circulation. Librairie Félix Alcan, Paris, 1912.

Kinesitherapy is the scientific utilization of movement for the treatment or prevention of disease. Under this heading, the authors include both gymnastics and massage; the latter being regarded as the simplest expression of passive movement. Kinesitherapy, far from being a new science, has come down to us from the very earliest periods of civilization. Historic records show that the ancient races of China, India and Greece, formulated a code of medical gymnastics, the diversity and general excellence of which are still an inspiration to our contemporaneous exponents. The writers consider that the art has been grossly neglected because ignorance and prejudice have successfully combated, during centuries, all attempts to exhibit its therapeutic value. They endeavor to demonstrate, by means of numerous and very practical illustrations, that kinesitherapy possesses a much wider range of usefulness than it is usually credited with.

From a therapeutic standpoint, three forms of movement may be recognized:

1. Active and free movements, such as are exhibited in practically all of the ordinary gymnastic exercises, and in the various games and sports. In recommending this form of movement, it is assumed, of course, that the respiratory and circulatory systems are functioning physiologically, that the nervous system is not in a state of exhaustion, and that the exercises are to be carried out daily, in progressively increasing proportions, and under the actual supervision of the physician.

2. Active movements, to which a varying degree of resistance is opposed by a trained attendant or by the physician. By eliminating the action of the antagonists, the element of muscular synergy, and all thoracico-abdominal and cerebral effort, the effect of this form of movement is to localize the expenditure of energy, instead of generalizing it as is the case with the preceding form. It therefore realizes the ideal conditions for obtaining the maximum therapeutic result in cases either of general asthenia, or of local disability, as, for instance, in the partial palsies of the extremities.

3. Passive movements, under which heading massage may be conveniently included. The numerous indications for this form of movement are too well known to be considered here. Special mention is made however of passive respiration, which is regarded as being the most important and the most useful of all passive movements. Unfortunately, it is rarely honored except for purposes of resuscitation.

The conditions of the organism which furnish the strongest indications for the employment of kinesitherapy, and those in which it exhibits its maximum efficiency are three in number:

a. When the organism is actually traversing the stage of development, that is to say during childhood and adolescence;

b. When it is undergoing a process of repair, as during the convalescence from the various acute infectious diseases, of which typhoid fever may be taken as the most significant example;

c. When it has become debilitated as the result of chronic disorders affecting either nutritional equilibrium or functional adequacy. This indication is supplied by such affections as obesity, diabetes, rheumatism, gout, and the various neuroses.

The actual technique of kinesitherapy is exposed in detail and with great care and precision. The circumstances which govern the choice of posture, the various movements or series of movements executed by, or communicated to, the different muscular groups of practically the entire peripheral musculature, the indications for each group of gymnastic exercises, as well as its therapeutic effects, both proximal and remote, are all factors which receive detailed consideration.

The terminal chapter is devoted exclusively to the rôle of kinesitherapy in the management of disorders of the circulatory apparatus, and probably contains the most valuable and practical suggestions offered by the authors. They show fairly conclusively that both the subjective and objective manifestations of organic cardiac disease are very favorably influenced by properly adapted and carefully regulated kinesitherapeutic measures. It is claimed, for instance, that dyspnoea, palpitation and precordial pain, are frequently relieved almost immediately by passive dilatation of the thorax and by massage of the extremities. L. S. A.

Laboratory Methods with Special Reference to the Need of the General Practitioner. By B. G. R. WILLIAMS, M. D., assisted by E. G. C. WILLIAMS, M. D., with an introduction by VICTOR C. VAUGHAN, M. D., LL. D. Illustrated with forty-three engravings. Pp. 194. St. Louis, C. V. Mosby Company, 1912.

The book, as indicated in its title, is intended for the general practitioner. It contains a complete record of the best laboratory procedures. Its particular value lies not only in its clear exposition, but also in its emphasis upon sources of error and upon the limitation of laboratory methods. The following extract from the chapter on "Vascular

Dramas" evinces the point of view of the authors: "A blood analysis should not, however, be over estimated, as a blood picture may be ever so beautiful and characteristic, teeming with symptomatic therapeutic indications and notwithstanding this appearance fail to indicate the chief etiological factor."

The general considerations pertaining to equipment are noteworthy. For example, the use of an inexpensive vacuum bottle instead of an expensive incubator is recommended for office work. A chapter is also devoted to the technic of the private post-mortem. The book is designed as an instrument for the application of scientific truths to the practice of medicine. It teaches that laboratory results are not to be regarded as a finality, but as a link in a chain of evidence. The country physician of the present day is also encouraged to throw light on some of the diseases with unknown etiology, as did his confreres of half a century ago.

H. S. B.

Practical Gynecology. A Comprehensive Text-Book for Students and Physicians. By E. E. MONTGOMERY, M. D., LL. D., Professor of Gynecology, Jefferson Medical College; Gynecologist to the Jefferson Medical College and St. Joseph's Hospitals; Consulting Gynecologist to the Philadelphia Lying-In Charity, the Kensington Hospital for Women, and Consulting Surgeon to the Jewish Hospital. Fourth edition, revised and rearranged. With five hundred and eighty-nine illustrations, the greater number of which have been drawn and engraved specially for this work, for the most part from original sources. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut street, 1912. Large octavo of 857 pages, \$6 net.

Many improvements have been made over the last edition of this popular work on gynecology. The author states in the preface to this fourth edition, that the work has been so rearranged as to secure what experience in teaching has demonstrated to be a more progressive order. It opens with special anatomy, followed in order by physiology; etiology; diagnosis; therapeutics, general and special; functional disorders; malformations; traumatisms; inflammations; displacements; ectopic gestation and genital tumors.

Many of the chapters have been largely rewritten, the number of pages increased, a great many new illustrations inserted, and a large amount of new material added in order to present an edition which is abreast of modern gynecological practice.

It is pleasing to note that special emphasis is laid on the conservative and medical treatment of many gynecological conditions.

A larger amount of space could have been profitably devoted to a more thorough discussion of cystoscopy. This subject is dismissed in a few brief paragraphs.

The style is clear, the arrangement is systematic, and the large number

of illustrations are excellent. The text is printed on good paper, and the book is well bound.

The latest edition of this well-known and popular work can be highly commended for reference and as a text-book to those interested in modern and practical gynecology.

T. L.

Developmental Pathology. A Study in Degenerative Evolution by EUGENE S. TALBOT, M. S., D. D. S., M. D., LL. D., Professor of Stomatology, Bennett Medical College (Loyalo University). Corresponding member, Budapest Royal Society of Physicians, Honorary President International Association of Stomatolgy, 1907, Paris. With 346 illustrations. Pp. 421. Richard G. Badger, The Gorham Press, Boston, 1912.

The title of this book leads one to believe that the subject matter for consideration concerns morbid processes in general as they are affected by heredity. Consequently, the first seven chapters occasion some surprise, for they are devoted exclusively to comparative embryology. The facts contained in them and the summary at the end of each chapter are of interest to the student in biology. The seven following chapters deal with abnormalities, both morphological and mental. Monstrosities, idiocy, lunacy, and degeneracy are taken up with an appropriate discussion of their causes. The remaining fifteen chapters show that the point of view developed is that of the stomatologist. They abound in ontogenetic and phylogenetic consideration of the nose, maxillary sinuses, the palate and the teeth. Dental pathology is detailed in its varied manifestations. The conclusions, however, are not convincing. The stomatologist like every other specialist is too apt to attribute the ills of mankind to a derangement, real or supposed to the particular system of organs which commands his interest. The statement that "when the indicanuria and excessive acidity are restored to normal, the blood as a rule resumes its proper function;" that "neurasthenia alone may cause nerve-end degeneration, destroy the fibrillae in the dental tubuli, and produce the same results;" and that "climatic changes cause lowered vitality and lessened resistance power, which bring about auto-intoxication resulting in change of tooth structure through the dental pulp," are in themselves not conclusive. It seems as if the author has lost sight of his main theme.

H. S. B.

Duodenal Ulcer. By B. G. A. MOYNIHAN, M. S. (London) F. R. C. S., Senior Assistant Surgeon at Leeds General Infirmary, England. Second edition, enlarged. Octavo of 486 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5 net; half morocco, \$6.50 net.

Following the frequently adopted plan of devoting a volume to an exhaustive consideration of some one important medical or surgical topic,..

the author two years ago presented the first edition of this important work, which now appears in its second edition amplified by his subsequent personal experience, as well as the experience of surgeons gleaned from the literature. In the first edition, the author presented the case histories of 187 personally treated cases of duodenal ulcer and in the present edition, he adds 115 more cases operated upon in 1909 and 1910. This added experience has naturally increased his knowledge of the subject and the careful manner in which the cases have been studied, certainly qualifies him to discuss in a positive and practical manner, the essential facts connected with this malady.

The general arrangement of the volume remains unchanged from the first edition. The first five chapters are concerned with the presentation of the History of the subject. Ulceration of the duodenum in cases of burns and scald. Uraemic ulceration of the duodenum. Tuberculous ulceration of the duodenum and the association of melaena neonatorum and duodenal ulcer. All of these subjects are of interest but are conditions which are not of especially frequent occurrence.

The principal part of the volume is devoted to chronic duodenal ulcer considered from every side, the symptoms, diagnosis, differential diagnosis and treatment. The author regards the symptoms as clean cut and distinctive allowing in the great majority of cases of a positive and accurate diagnosis. The treatment he regards as essentially surgical. A brief chapter on jejunal and gastro jejunal ulcer as a sequel to gastro enterostomy for the relief of gastric and duodenal conditions is of considerable interest. An important chapter on perforation of duodenal ulcer emphasizes the essential diagnostic points and indicates the need of prompt treatment. A final chapter on the pathology of duodenal ulcer completes the exhaustive study of this condition. The appendices to the volume contain in detail the case histories of all the cases operated upon.

It may be said that this volume presents the last word of a master upon a subject recognized as of the greatest medical and surgical importance and contains all the important facts gathered from his large personal experience as well as those gleaned from a careful study of the literature.

A. W. E.

Diseases of the Genito-Urinary Organs and the Kidney. By ROBERT H. GREENE, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and HARLOW BROOKS, M. D., Assistant Professor of Clinical Medicine, University and Bellevue Medical College. Third Revised Edition. Octavo of 639 pages, 339 illustrations. Philadelphia and London: W. S. Saunders Company, 1912. Cloth, \$5 net; half morocco, \$6.50 net.

The authors publish this edition with the purpose of presenting to the profession a book containing a complete resumé of genito-urinary work, including the most modern methods. The authors have included in this edition new ideas which they have thoroughly worked out.

The opening chapter discusses the general examinations of the patient, including history taking, and physical examination in instrumental diagnosis. Interesting and instructive features of this chapter are the deductions which may be formulated from direct questioning of the patient.

The chapter on cystoscopy is brief, but gives the practitioner an idea of the value of this means of diagnosis in renal conditions.

The section devoted to the methods showing the permeability of the kidney, gives the technic of the various functional tests, including the phenol sulphonephthalein test which has been recently introduced.

Chapter IV deals somewhat briefly with the laboratory methods in examinations of the urine and urethral exudates. This section is too brief in comparison with the importance of diagnosis obtained by these methods.

In chapter V the author takes up the kidney from the standpoint of embryology, anatomy and physiology.

Chapter VI-XVI includes the most important clinical manifestations of a diseased kidney. The treatment of these conditions is rather fully discussed.

The illustrations found in chapter XVIII are interesting and instructive and gives to the reader an idea of ureteral surgery.

In chapters XIX and XX the anatomy and physiology of the bladder is considered briefly, though the pathology of that organ is discussed more in detail. The surgery of the bladder presents nothing especially new; every day procedures being advocated.

Chapter XXI reviews the anatomy and physiology of the prostate. It is here, too, noted that the pathology of this organ occupies the most prominent place. The section on diagnosis and treatment of diseases of the prostate is fairly complete. There are several good illustrations and the explanations of the various operations are descriptive.

A discussion of the ante-operative preparation and treatment of patients about to undergo a prostatectomy, is made extremely prominent by its absence. The authors apparently fail to realize the importance which should be attached to such procedures.

The remaining portions of the book are devoted to the diseases of the testicles and epididymis, with a final chapter of Sexual Neurosis.

The book contains many instructive points and should make a valuable addition to the library of every practitioner.

J. F. SOUTHWELL.

The Immediate Care of the Injured. By ALBERT S. MORROW, M. D., Adjunct Professor of Surgery in the New York Polyclinic. Second Edition, Revised. Octavo of 354 pages, with 242 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$2.50 net.

The author tells us in the preface that "This book is not intended to supplant the physician or surgeon, but is designed solely as a guide in emergencies until the arrival of medical aid or when such aid cannot

be procured." Throughout the book this sentiment is emphasized and gives to the reader the conviction that the book is not one of the many compends of "home remedies" but simply a guide, to be used as a safeguard against absolute ignorance in the time of emergency. For the nurse and medical student it serves a double purpose of a primer of anatomy and physiology and of a text-book for bandaging and the administration of remedies suitable to counteract the poisons; for the layman, it acts as a comprehensive guide in giving first aid to the injured and impresses upon him, lines of treatment which should be avoided as well as advice which can well be followed in emergent cases.

Bandaging is discussed in detail and it is the reviewer's opinion that too much space is devoted to that subject, considering that the book is really intended for the non-medical man.

The subject of "Dressings" is well taken up.

Haemorrhage is exceedingly well discussed and is especially suited to the layman. The methods described are practical and the illustrations are explanatory in themselves.

In the treatment of contusions and wounds the author fails entirely to mention the administration of tetanus antitoxin. This may be excusable on the ground that it is the duty of the physician to give such treatment when he takes charge of the case; it is the reviewer's opinion that one of the most important features of an emergency kit is tetanus antitoxin and syringe. How often this dread disease could be prevented if the laity but realized the absolute necessity of immediate injection?

The chapter devoted to burns, scalds and exposure to cold is instructive and the advice given to one who is about to give aid to an electrocuted patient is noteworthy: "Do not touch the body until the current has been turned off, unless you are provided with rubber gloves," etc.

Fractures are taken up rather extensively for a first aid book and the general ante operative treatment is well discussed; the writer neglects to mention a "pillow splint" which is so often of extreme service.

No mention is made of the Gibney splint which is practical, and easily applied.

The chapters on asphyxia, unconsciousness and preparation in house for an accident case are interesting and should be perfectly well understood by the layman.

Poisoning and its treatment comprises a very comprehensive and non-scientific chapter; this is one of the strongest chapters in the book.

Transportation of the injured is the title of one of the chapters. It follows in a fair degree the manual of the regular army.

As a whole, the book is a good one and is an addition to any library. The medical man as well as the layman can profit by reading it. As a safeguard in a time of emergency it is of paramount value and should be appreciated in a physician's office as well as in a mining camp, a farm house, or a place of recreation away from the haunts of the doctor.

J. L. D.

ALBANY MEDICAL ANNALS

In Memoriam

DR. WILLIAM HAILES.

AN APPRECIATION AND A TRIBUTE

By His Brother, CHARLES J. HAILES.

A blue-eyed, dark haired, well-set-up young man entered the office of Dr. Alden March, in Albany, one crisp day in the early fall of the year 1868. He was accompanied by his father. The young man, then under twenty, was imbued with the desire to become a physician, and having heard much of the fame of Dr. March as a practitioner both of medicine and surgery had made bold to ask him the privilege of registering in his office as a student. Dr. March, always bluff, even gruff of manner, but withal big and true of heart, received his visitors with what might have seemed to them scant courtesy. Shrewd judge of human nature that he was, he did not require much time to reach the conclusion that the young man possessed not only determination but intelligence in more than ordinary degree, and that the idea of becoming a Doctor of Medicine was much more than a passing fancy with him—that it was indeed an obsession. Dr. March liked the young man's looks, and being in need of a student just at that time, the arrangement was soon made, greatly to the delight of the young man and his father.

The former was William Hailes. His worldly circumstances were by no means affluent. Indeed, his lot up to that time had been a constant struggle with adversity. His father, a respectable artisan and inventor who had come to this country from his native England, was doing his best to properly bring up a large family, the care of whom, with his somewhat slender income, proved such a drain upon his financial resources that the boys

were compelled to contribute to the common maintenance. "Billy" being the eldest, naturally had to bear the largest and heaviest load. Willingly he assumed more than his share. He did whatever his hands found to do. For years he delivered one of the city routes of the *Albany Evening Journal*, his territory including lower State street, the old Capitol, State House and Washington avenue and adjacent streets as far west as Knox street (Northern Boulevard), a point at that time regarded as the outskirts of the city. "Billy" did other work, in odd spare times, such as helping his father silver mirrors. He wasn't particular so long as the employment was honorable. While attending public school the young man had made the acquaintance of Prof. Charles H. Anthony, at that time one of the foremost educators of the Capital City and the active head of the Classical Institute bearing his name. This building, not much larger in dimensions than an ordinary dwelling, was located on the east side of Eagle street nearly opposite Lancaster street, where it still stands. Many of the best young men of the day were educated within its unpretentious walls. "Billy" Hailes wanted to be, but he did not possess the financial means. But he was not deterred or discouraged. He found a way.

Professor Anthony, too, was a good judge of human nature. He saw in the clear blue eyes, eager, alert manner and honorable ambition of the young man promise of brilliant manhood. He liked him, and determined to do all in his power to aid him to secure what he so much desired—an education that should fit him for the profession he had chosen. Thus it came about that while acquiring an education at Anthony's Classical Institute the young man paid his tuition fees, at least in part, by serving in the capacity of janitor. His hours were long, but he never grumbled. All through the course, Prof. Anthony watched, aided and assisted him. A mutual attachment sprang up which ended only with the death of the elder. "Billy" was his favorite pupil, and the fact that he was also janitor did not in the least militate against him. In fact, the contrary was the case. When he left the Institute it was with high honors. Prof. Anthony later gave a substantial proof of his friendship and interest by endowing in the Albany Medical College a chair—that of Pathological Anatomy—to be occupied during his life by Dr. William Hailes. The sum thus set aside, the income of which was to be enjoyed by Dr. Hailes, amounted to five thousand dollars.



When the young student matriculated at the Albany Medical College he carried with him the same habits of close application, studiousness and enthusiasm that he had shown in public and private schools. During his college days he was regarded as one of the most promising students, and was moreover a general favorite, as well among his classmates as with the members of the faculty. While standing high in all branches of study, he made a specialty of anatomy, having during his student days articulated several skeletons and learned the name and shape of every bone in the human frame. In this his knowledge of Latin, acquired in the Classical Institute, became of great value. Not only did he graduate *cum laude*, but he succeeded in capturing the prize eagerly sought for by every student—the honor of pronouncing the valedictory. This honor was awarded not by favoritism, but to the student having the highest marks and showing the greatest proficiency in all departments of study. He also did a real service to his beloved preceptor, Dr. March, in classifying the latter's notes, which had accumulated for a period of nearly half a century.

When, in 1871, the young Doctor put up his shingle and launched out upon the practice of his profession, he carried with him all the boyish enthusiasm, courage and determination that had characterized his student days. He did not make the mistake of regarding his education, either general or special, as finished when he left the walls of his alma mater. He was a student all his life. The mercenary idea of his profession was farthest from his thoughts. To succor the distressed and unfortunate, to relieve pain and suffering, to bring hope and cheer—to be indeed the Good Samaritan—this was his God-given mission. The commercial side was merely an incident. Scores of men and women in Albany will testify to the fact that it was difficult—almost impossible—to get him to render an account for services performed. No one ever had a more elevated idea of the medical profession than Dr. Hailes. He was a man with a vision. He possessed resolution, determination, self-reliance in a remarkable degree. He was a man of deep human sympathies, a believer in and student of human nature. Absolutely without thought of his own personal comfort or interest, all his efforts were directed to the practice of the profession he so deeply loved.

Thus it came about that when he began practice he did not merely sit down and wait for patients. He used every moment

of his time in adding to his knowledge and fitting himself to meet all possible emergencies, knowing that there was a place in the world for the competent man and that only time was needed to find that place.

His broad, optimistic view of the obligations of the profession is well illustrated in the remarks he made in his introductory address in the course of 1880-81 at the Albany Medical College, as Professor of Histology and Pathological Anatomy. To use his own eloquent words:

" Not alone are the rich inheritances of the past and the brilliant achievements of the present ours, but also upon *us* rests the responsibility of future progress and success. The limits of our exact knowledge are constantly widening and our standards are being planted far out upon the ever-advancing frontier line of investigation. Slowly the position of new headlands on Science's rugged coast are being made out in the dim twilight of the morning. Before us lies a new continent within whose borders are tracts of undiscovered country, heights inaccessible except to those not easily daunted, but behind which lies the fair land of the Hesperides, where the golden apples of success await all who claim them as the guerdons of sustained endeavor. And stretching all about us are the quiet valleys of every-day endeavor, the fruitful earth awaiting but the ploughshare of the investigator ere long to reap the golden harvest of honor and renown, and perchance confer inestimable blessings upon suffering humanity as the result of his patient labor. * * * It is grand thus to be able to obtain knowledge from its very fountain source and to receive reply in such clear and decided tones. Nor does Nature grow weary by oft-repeated questioning; her ear is never heavy. She replies instantly to listening nations, separated by the billows of the stormy Atlantic and flashes her messages across the silent valleys, over the level plateaus and by the sounding deep-sea grottoes of the ocean bed, while miles above, the bosom of the deep is lashed into fury by the gale. * * * This direct communication with Nature herself is almost transcendental in its character, bringing a peace and harmony to our inner being which is the purest type of enjoyment of which earth is capable. It is in the departments of Histology and Pathology, probably, that the most brilliant discoveries are to be made. The study of the minute anatomy of the body is one of the most fascinating which can engage your attention and none hold out so many inducements to the zealous, earnest student. These frames of ours are perfect storehouses of treasures. Take up at random, if you will, any part of our body; behold with what wondrous cunning its parts are deftly joined together. Examine it beneath the microscope—we find a new world of wonders revealed to us in the delicate blending of the warp and woof of the tissues. Bring to our assistance still more powerful aids which modern science has placed at our disposal, and we resolve each simple tissue into its ultimate structural elements, and we are charmed by the exhibit of such absolute perfection."

In thus counseling his students in the class-room, he revealed his own point of view, the attitude he assumed when in the trying moments of after years human life was committed to his keeping, when upon his every word or look hung the hopes of sorrowing, distracted relatives, when life depended upon what he did and how he did it.

“Friendship’s blind service, in the hour of need,
Wipes the pale face, and lets the patient bleed.
Science must stop, to reason and explain;
Art claps its finger on the streaming vein.
But Art’s brief memory fails the hand at last,
Then Science lifts a flambeau of the past.
When both their signal impotence deplore,
When learning sighs, and skill can do no more,
The tear of Friendship pours its heavenly balm,
And soothes the pain no anodyne may calm.”

Dr. Hailes was an irrepressible optimist. While there was life always there was hope. *Nil desperandum* was his motto. Many a time he gambled with Death—and won. Knowing as he did full well, the subtle, indefinable relation between mind and body, he purposely, persistently took with him into the sick room a hopeful outlook upon life, a breezy assurance, and thus established between himself and his patients a *camaraderie* which in many cases did perhaps as much as the administration of drugs to bring about the desired recovery. Always full of good cheer, he carried a breath of the busy, outside work-a-day world with him into the darkened chambers where his errands of mercy so frequently called him. Many a patient, distraught with pain through interminable hours, has blessed him for his visits, the succor and comfort and the messages of strength and hope he brought,

“The kindly eye, the brow serene,
The genial smile, the noble mien,”

were to them as balmy breezes of the morning, the opening of a door into God’s sunlight.

Of necessity, his practice, at first, was very largely among the lower and middle classes. It was known to be to a great extent gratuitous, but that made no difference. He was just as earnest and faithful in the case of the poor foreigner whom misfortune had overtaken, as with the well-to-do and wealthy patient. Thus

it was that thousands among Albany's poor and lowly called him blessed, and mourned sincerely the stern decree of fate that forever ended his career in its very height of success and beneficence.

Faithfulness in small things brings responsibilities in greater. With the added skill and knowledge which must come to the earnest student, the insatiable craving for new points of view and the patient investigation of new problems constantly arising, came also more desirable and more important practice, more difficult cases. Presently, the wealthy sought his services, the older practitioners his advice and counsel. Then he came into his own. And along with all this manifold activity in regular practice and in college work he served on the staffs of the city hospitals. During the years 1869-71 he was resident physician in the Albany Hospital and later attending surgeon at the same institution and at St. Peters Hospital. In 1872 he was Demonstrator of Anatomy in the Albany Medical College; in 1873, lecturer on Surgical Dressings and Appliances; from 1874 until stricken by severe illness which incapacitated him for further work, he was Professor of Histology and Pathological Anatomy; he held daily classes in Practical Microscopy in Alumni Hall of the College and frequently lectured before medical and other societies upon technical, scientific and popular subjects. He performed many major operations. He was Vice-President of the Albany County Medical Society, in the year 1880, and a delegate to the British Medical and New York State Societies; was President of the Alumni of the Albany Medical College, and delivered the address in 1897. For several years Dr. Hailes was Chairman of the Committee on Pathology of the Albany County Medical Society, and was also Censor of the Society, and a member of the State Board of Medical Examiners.

His practice was early interrupted by two trips abroad, one taken in 1875 to Germany and Italy, the other three years later, to Paris and London, where he attended numerous lectures and clinics, thus enlarging his knowledge by personal contact with many of the most eminent practitioners of the old world. Returning to his native land and city with this enlarged point of view and additional skill, he became more useful and more prominent than before. Still further to add to his popularity with certain classes of patients and to gain a more intimate relation to them, he continued the study of the German language which he had taken up while in the Fatherland in connection

with his medical studies, and in course of time became able to converse with German born patients almost like a native.

He made a specialty of Histology, Pathological Anatomy, Embryology and Fractures and Dislocations. When the scientific world was startled by the discovery of the X-rays, Dr. Hailes instantly saw the benefits to be derived by the profession and more especially in the class-room. He made special journeys to New York where he obtained the necessary apparatus and equipment. Thus he was the first in Albany to make demonstrations with the Roentgen rays and thereafter employed the great discovery in his lectures and practice, being frequently called upon by his fellow physicians to use the X-ray in difficult and complicated cases. In this connection, he devised a very successful projection apparatus for the demonstration of the microscopic slides.

In another field of operative surgery also, he became pre-eminent. Before the general use of diphtheritic anti-toxin, he was a pioneer in Albany in the operation known as Intubation of the Larynx, for those dreaded diseases of childhood—membraneous croup and diphtheria. Hundreds of Albanians are to-day living monuments to his skill in that operation, which he performed more than *sixteen hundred times*, as shown by the records he left. Many others have been saved from crippled lives by his bold resourcefulness as an operative surgeon. In intracranial surgery also, he had extended experience, and became a successful laparotomist. The major operation of abdominal section, now so common, was in the early days of his practice one much dreaded both by patients and surgeons alike, on account of the great mortality attending it, a mortality due not so much to the lack of skill on the part of the operator as to deficiency in the knowledge of antiseptics.

In practical microscopy Dr. Hailes was an enthusiastic student and demonstrator from his college days on. With this natural bent of mind, it was inevitable that he should have been strongly attracted to the study of Histology, which has been defined as that branch of biological science which treats of the microscopical structure of living organisms, both animal and vegetable. With the work of Kölliker, Schleiden, Remak, Reichert, Müller, Virchow and others in this fascinating field of investigation, and the epoch-making discovery of the law that all animal as well as plant tissues are composed of and develop from cells, Dr. Hailes

was thoroughly familiar. In his classes he held his students almost spellbound by his demonstrations on the screen. His use of Micro-photography for this purpose was the first recorded in the State. He made original investigations of intercellular substances, and of the four great groups of bodily tissues, epithelial, connective, muscular and nervous, and like many others who preceded him, marveled over the insoluble problem as to what determines the lines of growth of the different cells, causing some to develop to form one kind of tissues and others to form other kinds of tissues. Thus to his students he unfolded some of the infinite mysteries of the human body through the use of the microscope. Out of his own private funds he willingly invested considerable sums in the latest and best apparatus. While each student was required by the college rules to make freehand sections of specimens to be studied—sections of representative tissues and organs of the human body—Dr. Hailes, taking his bent, no doubt, from his father, who was a local inventor of note, devised a freezing Microtome which proved of the greatest value. This he conceived and perfected, and by its aid, in ten minutes if desired, a thousand sections from 1-1000 to 1-1600 of an inch in thickness could be readily obtained. This instrument stood the test of many years of actual work in the laboratory and became an absolute necessity. In connection with this work, also, he made sections of hens' eggs that had been incubated for varying periods, from one to twenty days, showing upon the screen the development of the embryo through its marvelous changes from nucleus to full-grown chick.

Among some of Dr. Hailes' contributions to medical literature were the following:

He wrote upon The Surgical Treatment of Diphtheria in 1891, and when the O'Dwyer Method of Intubation was proposed he was very active and reported upon one hundred cases. This report attracted wide attention, and was published in the Proceedings of the Medical Society of the State of New York, and was also presented by Dr. Hailes before the British Medical Association, and was printed in the *British Medical Journal* in 1890.

His work in pathology was particularly industrial, and among the records of his cases presented at various medical gatherings were one of triple cast of the larynx and trachea, a case of fat

embolus of the lung, microscopical demonstrations of trichinosis, bacillus tuberculosis, and microphotographs of blood cells.

His surgical practice was large, and in the *ALBANY MEDICAL ANNALS* of October, 1898, appears a report of a month's service at the Albany Hospital, including cases of cesophagotomy, fracture of skull, inguinal hernia, fracture of pelvis, and thirty-five cases of croup treated by intubation.

He also reported at other times, cases of hematuria, and tumors of the bladder, and operations upon an imperforate anus of eight weeks' standing, resulting in recovery; and in 1891 published a clinical lecture upon the management of fractures.

In his personal relations, Dr. Hailes was the soul of honor, as was his father before him. No stain can be found on the escutcheon of either. To be good, to do good, to love the right, to do no man an injury but rather a service—these were his guiding stars. His nature was singularly direct and free from guile. Imperfections, no doubt, he had, but they were of the head, not of the heart. As a husband and father he came very near being a model—watchful, loving, indulgent, generous. His disposition was sunny, his manner cordial even to familiarity, his nature hopeful, light and free-hearted.

* * * * *

In the midst of all his beneficent activities in the class-room as teacher, in the hospitals as operative surgeon, in the homes of Albanians as practitioner of medicine, the blow came. Overwrought nature rebelled at last against the terrific strain, too long continued. The grand constitution which he had inherited finally broke down. The tired brain gave way. Apoplexy ended a career which, had he conserved his energies, might have gone on for many years longer. Intimations of the coming of the blow had not been wholly wanting, but he heeded them not. The calls were too insistent. His will was of iron. Many a time, after a wearying day of ceaseless toil, he had stepped into his chaise, chirrupped to his faithful old horse that knew his every whim,—“Now for Bonnicastle, Chubb!”—picturing to himself a few hours of needed repose with his family in the beautiful country home he had built within sight of the Capitol on the bank of the winding Hudson. Even on the way, while yet there was daylight, he would give the old horse free rein, and, reluctant to lose even a precious moment, read some medical or surgical treatise or uppermost professional topic. More than one resident

along the river road could testify to having seen him fast asleep on the way, the faithful old Chubb always taking him safely home even without his master's guidance.

And when there came at last the cruel stroke that shattered all his hopes of future conquests in his chosen work, leaving him with a slender hold on life, a mere wreck of his former self, he could not for many months, adjust himself to the changed conditions. His imperious will asserted itself. He would again put on the harness;—the busy world needed him. How could he give up forever that labor he so dearly loved! He yearned for the self-imposed toil. It was become part of his very nature. Life without activity would be worthless. Like the caged bird that dashes itself against the imprisoning bars, only to fall back bruised, panting, exhausted, he rebelled against the unaccustomed idleness, only to learn the hard lesson, cruel though it was, that his life work was done; that he must wait with folded hands, a mere useless clod, for the final summons that with care and conservation of the energy that remained might be delayed—how long God only knew. O, the irony of fate that thus takes out of life's activities one so useful, while yet in the fullness of his prime! He had been of real service in the busy, work-a-day world. He had won some of its envied prizes. But only the surface had been scratched. How he longed for

“The shining days when life was new,
And all was bright with morning dew,
The lusty days of long ago.”

With what intensity did he yearn to start again from his vantage-ground of knowledge and experience, to live through a second growth, another span of half a century! What could he not have accomplished! But it was not to be. He must accept the inevitable, though it was hard, hard, hard!

And thus he waited calmly for the end, the final fading of his lingering day, knowing his condition as well or better than his attending physicians knew it—and the very best specialists in the city and state gladly volunteered their services. He prescribed for himself, always carrying with him the powerful heart-stimulant that might be needed at any moment, for the hardening arteries and impaired circulation strained that organ to the bursting point.

“No rest that throbbing slave may ask,
Forever quivering o'er his task.”

In the long, weary years of his enforced idleness he was cheery and companionable to the last. No one ever heard complaint from his lips. Life to him was still beautiful. Though with locomotion and eyesight greatly impaired, could he not still thank God for the inestimable privilege of reading the world's best literature? With his favorite authors—Shakespeare, Byron, Wordsworth, Gray, Holmes, Stevenson—always at hand, he whiled away many a lagging day in committing to memory some of their most famous passages, which he would repeat by the hour if one were sympathetic enough to listen. The ever-active brain must find some employment.

Perhaps his best loved author, next to the Bard of Avon, was the inimitable Dr. Oliver Wendell Holmes, acknowledged "Autocrat of the Breakfast Table," whose contemporary he was and with whom he once had the exquisite pleasure of dining, at that famous Mecca of the foremost literary men and women of America. Dr. Holmes was the patron saint of every disciple of Æsculapius. His poems, too little appreciated perhaps by Americans though not so abroad, were prime favorites with Dr. Hailes. Their peculiar beauties appealed to him as a physician with especial force, for many of them are replete with apt medical allusions, particularly so that literary gem entitled, "The Living Temple":

" But warmed with that unchanging flame,
Behold the outward moving frame,
Its living marbles jointed strong,
With glistening band and silvery thong,
And linked to Reason's guiding reins
By myriad rings in trembling chains.
Each graven with the threaded zone
Which claims it as the Master's own."

* * * * *

Then mark the cloven sphere that holds
All thought in its mysterious folds,
That feels sensation's faintest thrill,
And flashes forth the sovereign's will."

Dr. Hailes possessed a truly religious nature. While strongly inclined to believe in the theory of Evolution, he could not receive it as absolutely proved; he used to say that to accept it unreservedly required as much faith as to believe in creation and revelation. To one who had so deeply and lovingly studied

the marvelous construction of the human body, showing, however viewed, "eternal wisdom still the same," infidelity was impossible. While he could not fathom the awful mystery how, when these "mystic temples"—"even the cloven sphere that holds all thought in its mysterious folds,"—have gone back to their mother-dust, memory and recollection were possible, he refused to dogmatize. Most reverently he often said: "It may be. I know not. Let us hope. God—and there must be a God, for a plan presupposes a Planner—God doeth all things wisely." In trembling fear he trusted to the love divine. Upon Him he cast his every earth-born care.

And so, whether like the Chambered Nautilus, he has merely left the outgrown shell by Life's unresting sea, and is now with the ever-blest, in statelier mansions, or in the cold ground where we laid him with many tears, may God bless blue-eyed Doctor Billy! Let us remember him as we knew him in his prime, as the beloved instructor, the bold, resourceful, skilled surgeon, the wise and learned practitioner who, had he been content to specialize more closely might have reached unknown heights of fame. Let us think of him as repeating—as he often did—that exquisitely beautiful closing stanza from "The Living Temple":

"O, Father, grant thy love divine
To make these mystic temples thine!
When wasting age and wearying strife
Have sapped the leaning walls of life,
When darkness gathers over all,
And the last tottering pillars fall,
Take the poor dust thy mercy warms,
And mould it into heavenly forms."

Dr. HAILES'S ILLNESS.

The following description of Dr. Hailes's illness is contributed by Dr. Thomas W. Jenkins, who was a student in his office, and later succeeded to much of his preceptor's practice:

Five years before Dr. Hailes sustained his disastrous stroke, he had some angina pectoris, accompanied by slight albuminuria and oxuluria, which disappeared under treatment, and at that time was advised to cease his strenuous activity, which to some extent he did. However, during the winters of 1899-1901, he performed an enormous amount of work. The Roentgen rays having just been discovered and given to the public, he threw his usual energies into the study and practice of that subject, and shortly began to complain of a numbness in the index finger of his left hand. Then, on April 30, 1901, while at Delmar Station waiting for a

train, he felt a slight sudden dizziness. The next day, May 1, 1901, he noticed some difficulty in seeing, especially to the left. If there were two figures, such as 91, he would see but the right-hand figure. Upon examination, it was discovered that about three-fifths of the retina of each eye was paralyzed, considered to be due to a thrombus in the artery of the cuneus of the right hemisphere. Six days later the thrombus extended back and occluded a branch running to the extreme posterior portion of the internal capsule, causing sensory paralysis of the left side. In August of the same year, he had an epileptiform attack which recurred from time to time for two years, and then disappeared, and he was fairly comfortable or, as he would say, making the best of a bad thing, until July 5, 1912, when after working on the lawn during a heated spell, he complained of headache, and lost nearly all of his sight. On the 7th, he became unconscious, and died.

Dr. Hailes during all the time of his affliction maintained considerable interest in the progress of medicine, especially in the new discoveries of micro-organisms causing various diseases, such as the Treponema pallida, etc. He was especially pleased if any member of the medical profession would call to see him, and liked to think he was not forgotten by them, and was ever grateful to the several men who attended him professionally, from time to time.

Original Communications

MEDICAL WORK IN THE STATE HOSPITALS.

Read before the Medical Society of the State of New York, April 16, 1912.

By CHARLES W. PILGRIM, M. D.,

Supt. Hudson River State Hospital, Poughkeepsie, N. Y.

When I was asked to prepare a paper on the medical work in the State Hospitals I was told that I would not be expected to say anything about the work of the Psychiatric Institute, but I cannot refrain from referring to the great influence which the Institute has had, under the wise and able direction of Doctors Meyer and Hoch, in developing the high scientific character of the work which is now being done in all the hospitals of the State.

In the first place, it will perhaps be well for me to state that all medical positions in the hospitals for the insane have for the past twenty years been completely under the control of the Civil Service Commission, and that neither politics nor personal influence have the slightest weight in either appointment or advancement. Competitive examinations, sensibly and conscientiously conducted for the purpose of testing the applicant's pro-

fessional and general fitness, are held from time to time, and during the twenty years or more of such practice I have yet to learn of a well substantiated charge of favoritism or unfairness. In order to secure the very best men obtainable, the last examination was not confined to residents of this State, but was thrown open to reputable graduates in all parts of the country and a gratifying number of applicants took the examinations which were simultaneously held in neighboring states. The salaries of the medical officers have not, heretofore, been sufficiently attractive to bring enough promising young men into the service to fill the vacancies. Recent efforts have, however, placed the medical service on a better basis so far as salaries are concerned, and we hope by the erection of small dwellings such as are provided for the U. S. Army officers, to soon be able to offer ambitious medical men the possibilities of home life in addition to fair salaries, secure employment, and steady advancement, in a field of interest, usefulness and honor.

When one has determined to devote his life to the cause of the insane there are three medical questions which confront him in regard to insanity: viz., its prevention, its cure, and the care of those who cannot be cured.

The subject of prevention is a very important one and has been ably treated by our chairman. I will therefore merely say that the three most prolific causes, "wine, women and worry," are to a large degree preventable, and when the public learns this fact much will have been done to prevent the large annual increase of which we now complain. The efforts of The National Committee for Mental Hygiene, the formation of which was largely due to the vigorous impulse given to the subject by Mr. Clifford W. Beers, the author of the book, "The Mind That Found Itself," is in a fair way to accomplish valuable results in the way of making the preventable causes known and in teaching the public how these causes may be avoided.

The treatment of insanity may be roughly divided into three stages: the barbaric, the humane, and the remedial. It is true that in history we find mention of a place for the care of the insane, established by the monks in Jerusalem, in the latter part of the 5th century, and there is evidence that even earlier in Egypt and Greece they were kindly and humanely cared for; but these ancient beneficent methods were lost sight of during the following centuries and the period of demoniacal possession of the

Middle Ages came in, when torture and the most cruel forms of punishment were resorted to for the purpose of driving out the evil spirits. These conditions lasted through the 17th and down into the 18th century, when the mildly insane were either cared for in shrines or, if harmless, permitted to wander about the country. Those who were considered dangerous or a menace to the community were sent to jails or chained in dungeons. Finally it was recognized that there was a difference between the insane and the criminal, and the result was the gradual occupancy by the insane of abandoned cloisters and monasteries, the influence of which may still be seen in the architecture of some of the older institutions. Neglect and grave abuses naturally grew up and it was not until 1792 that Pinel struck the chains from the lunatics in the Bicêtre. From that time to the middle of the 19th century we have the humane period with the gradual growth of non-restraint. There are many, however, who can still remember the daily use of the crib, the straight-jacket, and the muff, articles of restraint which are looked upon by the younger men in the service much as we look upon the iron maiden with the pointed spikes in the Nuremberg Museum. Slowly but surely the corridor with its locked doors and prison aspect gave place to the hospital ward with the open doors and decorated walls. The attendant was succeeded by the nurse, and, in short, during the last quarter of the 19th century the remedial period reached its greatest height in the development of the modern hospital for the insane, the medical work of which I shall now attempt to describe.

On the 1st of October last, there were in the fourteen State hospitals 30,445 patients with approximately 200 physicians to care for them. The medical organization of each hospital consists of a superintendent who must be a graduate in good standing of a reputable medical college and who must have had at least five years' actual experience in the management of hospitals for the insane. There are, of course, various heads to the different departments, but the authority of the superintendent is supreme, for it is rightly considered that everything pertaining to the management of a hospital for the insane has a medical aspect. In addition to the superintendent there is a first assistant, who assumes the superintendent's responsibilities in case of absence or sickness, and various other medical assistants, in the usual proportion of one to one hundred and fifty patients. This

proportion is smaller than it should be, but by judicious arrangement the acute service can usually be arranged in the proportion of one to twenty-five. There is, in all the larger hospitals, a well equipped pathological department with a thoroughly educated pathologist in charge. A capable chemist is also always employed. The law requires that there shall be a woman physician in every hospital, but I have found the service of medical women so useful that I have had as many as four on the staff at Poughkeepsie at one time.

All patients are admitted directly to the Reception Hospital, where their commitment papers are examined and the anamnesis taken. I might here explain that a law passed in 1908 permits the admission of voluntary patients. Under this law it is only necessary for the patient to make application and sign a statement that he will give ten days notice of intention to leave. This provision is necessary to protect the community against the dangerous insane, for where a voluntary patient is found to be dangerous, this ten-day clause enables the friends to secure legal commitment before discharge becomes necessary. I am glad to state that the voluntary admission law works extremely well. Many borderline cases, realizing their condition, seek early aid, and many others who have been patients recognize the return of unfavorable symptoms and voluntarily come back in time to ward off a serious attack.

Another provision which is not well enough understood by the medical profession is the "emergency clause" of the medical certificate, which makes the immediate approval of a judge unnecessary. As soon as the petition and medical certificate have been made, the latter containing evidence that immediate care and treatment are necessary, the hospital authorities, upon being notified, will send for the patient and retain him under the emergency certificate for a period of ten days pending the final completion of the papers. As it is often impossible to immediately obtain the signature of a judge, this clause is a very important one for the protection of both patient and community.

All patients are transported from their homes or places of commitment by nurses sent from the hospital to which the patient has been committed. It is illegal to confine any insane person in a jail or prison pending commitment, and in order to overcome any possible abuse in this direction a recent law places the re-

sponsibility for proper care pending commitment upon the health officer. This law is yet in its infancy but promises well.

After the preliminary history is taken the patient is sent to the ward, where he is bathed and carefully examined for bruises or injuries, and he is then put to bed, where he is kept at least three days, during which time a complete and careful mental and physical examination is made. The classification of Kraepelin, is, in the main, followed. Psycho-analysis, of course, plays an important part in the examination, but no organ or function is slighted and no chemical or bacteriological aid to diagnosis is neglected. In addition to the ordinary physical examination, examination of the eye, the blood, the spinal fluid, and the excreta are routine matters. The thoroughness of the work will be seen by an examination of the specimen histories which I submit for your inspection. When unusual experience is required in surgery, gynecology or ophthalmology it is supplied either by the visiting staff, or by calling in consultation men of established reputations in their various specialties.

With prevention and early treatment in view, outdoor departments have been started in one or two of the hospitals, but while this practice is not yet general, it is a common occurrence for the physicians connected with the various hospitals to be consulted by those who fear insanity.

All the State hospitals are supplied with every known facility for hydrotherapy and electrotherapy, and the various packs, douches, baths, and electrical treatments, together with massage, play an important part in the treatment of the insane. There are, in all the larger hospitals, well equipped examination rooms for eye, ear, nose, throat and gynecological work. You will also find convenient and up-to-date operating rooms where major operations are frequently performed by members of the house or visiting staff in the presence of the other physicians and the graduating class of nurses. Neighboring physicians are invited to these operations and often attend. All State hospitals are required to maintain an efficient training school for nurses. You will obtain an idea of the work done by the prospectus which you will have an opportunity to examine. Not only are the training schools for nurses maintained at a high standard, but there are, in addition, training schools for attendants intended for those who have not had sufficient educational advantages to enable them to profit by the more advanced teaching given to

those in training for nurses. The attendants' school is, of course, more elementary, but in it thorough training is given in the regular daily duties of those who are content to confine their work to the management and care of the ordinary insane, rather than to the nursing and care of those who require the services of those skilled in general as well as mental nursing.

After the case has been thoroughly studied by the physician in whose charge the patient is, he is presented at one of the regular staff meetings, where every member of the staff takes part in arriving at a correct diagnosis. History, symptoms, and prognosis are freely discussed and after a diagnosis has been reached, a plan of treatment is mapped out. In doubtful or important cases the patient will be presented more than once and in all cases where discharge is to take place the patient is presented before the discharge is decided upon. In case of death an autopsy is held in about 50 per cent. of the cases, and the pathological findings are reported at regular meetings by the pathologist. As there were nearly 3,000 deaths last year it can be readily seen that the material furnishes vast opportunities for observation and study. In unusually interesting cases the pathological studies are continued at the Psychiatric Institute, where, later, exhaustive reports are made for the benefit of those who were interested in the case. The staff meetings are the most important means we have for keeping up medical interest and in supplying stimulus for work and study. At least two are held each week, and in some cases where the admission rate is unusually large it is necessary to hold them daily. So far as possible all the younger men take a course at the Psychiatric Institute to fit them for undertaking the study of mental cases in accordance with the newer psychiatric methods, and in the larger hospitals the work of arranging material and presenting cases at the staff meetings is under the immediate charge of a clinical director whose experience and training especially fit him for the work.

The quarterly interstate meetings, held under the direction of the Director of the Psychiatric Institute, have great influence in initiating and maintaining a satisfactory state of medical efficiency. These meetings occupy two days and are held in different parts of the State in order to give all an opportunity to attend, and at these meetings many valuable papers are read and a number of interesting clinics held.

In addition to the regular staff and interstate meetings

medical interest in our work is stimulated by the quarterly conferences with the Commission in Lunacy, at which all hospitals are represented by the medical superintendents and managers. At these conferences papers relating to medical and institutional matters are read and discussed and the combined judgment of all the superintendents is thus obtained in regard to the best methods of hospital management. The papers read at the inter-state meetings and the conferences, with their discussions, are published in the State Hospitals Bulletin, which is a quarterly journal of value and interest to all who are engaged in our specialty.

With a population of more than 30,000 in the fourteen State hospitals there are on an average 2,000 patients confined to bed suffering from various ailments. Therefore, in addition to the experience in mental diseases our physicians have ample opportunities to perfect themselves in diagnosing and treating the various maladies which usually fall to the lot of the general practitioner. The fact that an insane patient can be of but little help in a physical examination tends to make the hospital physician a careful diagnostician, for his conclusions must be formed entirely upon the signs and symptoms which he observes. In view of all this medical activity it can be seen that the opportunities for ambitious young men are very great, for he would be a drone indeed who would not find his interest awakened and his vision broadened surrounded by the many opportunities which a State hospital offers.

From what I have said you may infer that all our efforts are confined to the refinements of diagnosis and the elaboration of case records. But such is not the case. For while the psychoanalytic methods of Freud and Jung, the auto-suggestive and hypnoidal methods of Janet and Sidis, the clinical methods of Kraepelin and Clouston, the re-educational methods of Binet and Simon, and the laboratory methods of Widal and Wasserman, all find their proper places in our daily work, there are many other duties in the life of a medical officer in a State hospital which are equally important to the comfort and recovery of the patient. In the expressive language of Sir Clifford Allbutt, there is much more in the medical care of the insane than "mere bottle medicine." The established regimen and discipline of a hospital are felt for good by the patient as soon as he comes under their influence and do much to promote a cure. In fact

the regulation of exercise, occupation and amusement, and certainly the regulation of the diet, are purely medical duties and should receive the closest attention of the medical officers. A long walk which brings the patient to the point of absolute fatigue is often more beneficial to one suffering from restlessness and excitement than a dose of chloral. Properly selected occupation and amusement will often bring forgetfulness of woes where medicine would fail, and a judiciously selected diet will do more to overcome digestive ills than many of the much vaunted anti-dyspeptic compounds.

And now you will naturally ask "What is the result of all these medical efforts?" and I will try in a few words to answer.

There were admitted into the fourteen hospitals of the State during the year ending Oct. 1st, 1911, 7,260 persons, exclusive of transfers from one institution to another. During the same period 6,072 persons were discharged. Of this number 1,698 were considered cured, 1,363 were sufficiently improved to warrant their return to home surroundings, 126 were not insane, but were suffering at the time of admission from temporary symptoms of mental disturbance due to drugs or liquors, and 2,885 died. We thus see that 3,187, more than half as many as were discharged, and about 44 per cent. of the number admitted, were restored to home and friends and presumably to lives of usefulness. Of those admitted 1,522 had been treated for mental trouble before, and this fact might be urged by some to show the incurability of insanity, but certainly the return of a rheumatic condition, a digestive trouble, or an inflammatory state, in ordinary practice, is not used as an argument against the efficacy of treatment. Therefore, with sufficient accuracy for practical purposes we may say that nearly half (44 per cent.) of those sent to hospitals for the insane fully recover or improve sufficiently to return to their former habits of living. In addition another ten per cent., while showing no improvement, do not manifest dangerous tendencies and are therefore returned to the care of their friends. About six per cent. continue without improvement and nearly 40 per cent. die. Of the 44 per cent. discharged as recovered or improved nearly 50 per cent. return sooner or later, so that as a net result we have about 22 per cent. of permanent recoveries. This accords quite closely with the results obtained by Dr. Thurnam in his careful study of the cases in the York Retreat. His results were expressed in the following formula:

Of ten persons who become insane five recover and five die sooner or later during the attack. Two remain well during the rest of their lives and three sustain subsequent attacks, during which two of them die.

Sir Arthur Mitchell in his analysis of the life histories of several hundred patients came to nearly the same conclusions, so I think we may consider the figures presented as fairly accurate.

Insanity is acknowledged to be a serious disease, and when we stop to consider the defective character of the foundation upon which we so often have to build, the bad heredity and imperfect development, together with the large number (about 25 per cent) suffering from general paresis and senility, sent to us for care instead of cure, it appears to me that the percentage of cures which we are able to show is remarkably good. The fact that we are dealing with hospital cases should also be taken into consideration, for statistics carefully compiled by the Massachusetts Board of Insanity show that of all cases of mental trouble treated by physicians of that Commonwealth during 1904, only 55 per cent. were finally committed to hospitals for the insane. It is, therefore, plain that hospital statistics do not accurately show the curability of mental trouble, and that in order to make a fair comparison with other diseases the percentage should be considerably increased.

Lugaro, in his recently published book on "Problems in Psychiatry" says, "We do not share the pessimistic view held by some that the application of therapeutic measures in mental diseases is always a hopeless task. Certainly some of the causes for our want of success are inevitable; but many others will vanish with the progress of medicine."

While I make no claim that we have a panacea for all mental ills I do claim that we are not much worse off than those who treat serious disorders of other important organs. I also claim that during the last fifteen or twenty years the field of psychiatry has been as well tilled as any other and that the results have been as good, and I further believe that despite the rich yield of the recent past the near future holds still greater promise.

Therefore, before closing my paper I want to again call attention to the splendid opportunities which the State service offers as a life work for ambitious and studious young men. While the emoluments may not equal those of general practice, to the

student and investigator, the rewards are satisfactory. To be able to point out "the way that madness lies," to restore to sanity "the mind o'erthrown," and to make useful, and in a measure happy, the lives of those beyond the hope of cure, is certainly a work which ought to satisfy the ambition of anyone who wants to feel that he has added a little something to the sum of human happiness. The work is neither unduly depressing nor discouraging. There are, of course, disappointments and limitations, but there are also pleasures and opportunities, just as there are in other branches of medicine. The words with which Dr. Benjamin Rush closed one of the chapters in his book on "Diseases of the Mind," appear to me to be particularly appropriate at the present time when the scientific treatment of the insane seems at its best:

"After the history that has been given," wrote the good old Doctor, "of the distress and despair induced by mental derangement, I should lay down my pen and bedew my paper with my tears, did I not know that hundreds are now alive and happy who were once afflicted with it. Blessed science! which thus extends its friendly empire, not only over the evils of the bodies, but over those of the minds, of the children of men!"

TOXIC DELIRIA: REPORT OF CASES.

Read at the Annual Meeting of the Medical Society of the State of New York, April 18, 1912.

By N. A. PASHAYAN, M. D.,

Schenectady, N. Y.

No attempt will be made in this paper to discuss the relation of toxemia in general to the genesis of psychoses. The cases to be reported comprise some of a larger number observed during the past four years in the city of Schenectady and its vicinity and indirectly they throw some light upon the prevalence of such disorders that hardly ever reach the confines of state institutions. The most familiar types of toxic delirium are produced by alcohol, morphine or cocaine and our knowledge in these fields has been greatly enhanced by the studies of Bothoeffer and Wernicke. Deliria of other toxic agencies are essentially analogous to the

alcoholic variety yet differ in certain particulars as will be pointed out later.

The first case to be related was an acute toxic delirium induced by "Somnos," which was introduced a few years ago as a safe and efficient hypnotic by H. K. Mulford Co. and eagerly seized upon by the profession at large. The patient, a woman, aged 38, married, has had one miscarriage and probably also an antecedent luetic infection. She was subject to attacks of intense pain in both arms every time she happened to immerse them in cold water. In disposition she was erratic, suspicious and apt to go to extremes in everything she attempted to do. She suffered with chronic insomnia which became intensified by the attacks of pain in the upper extremities. Upon the prescription of a physician she took "Somnos" as a hypnotic and continued doing so in ascending doses. In July, 1910, she was suffering with pain in the arms and took one pint of the preparation within twenty-four hours without, however, getting any sleep or relief. Presently a multitude of voices like a thunder storm came upon her. She could hear all the neighbors talking about her and see them watch her movements. She believed that the entire house was wired mysteriously in the twinkling of an eye and through these wires her thoughts were conveyed to distant parts. She could hear hundreds of voices and diverse languages through the telephone although she had not been near it. Her body was charged with electricity and would not allow her husband or the physician to touch her with fear of a resulting mortal shock. With these hallucinations she developed the fixed idea that the neighbors and one man in particular had wired the house out of jealousy and revenge and she was to be tortured and killed. Notwithstanding these vivid hallucinations and persecutory ideas she was cheerful and even at times hilarious. She seemed to derive a morbid pleasure out of this seemingly torturing situation. When left to herself she was abstracted and seemed pre-occupied as if in a dream, but as soon as spoken to, she would respond, was familiar with the month, day and year and able to give clear and accurate information about her past life as well as recent occurrences. She was alert, and in discussing matters of business keen and discriminating as ever. At the end of three days all the imaginary voices subsided, the wiring was such as mysteriously removed. The allopsychic ideas

lingered for a week or more and then disappeared. Recovery was complete and no relapses have occurred since.

Among the extensively used remedies, salicylic acid and its congeners occupy a prominent place and deservedly so. In acute articular rheumatism and allied conditions their action is specific and often large doses are given for the control of the disease process. It is often difficult to decide in a case of complicating delirium if it is due to the specific virus and its attending pyrexia or the drug employed should bear the blame. We have seen cases, however, in which the cerebral symptoms were directly attributable to the chemical agent employed and vanished with its discontinuance. One illustration of this kind is as follows: A middle-aged woman with no cardiac or renal disease, developed neuritis of the left arm without fever or other complication. The pain was intense for the relief of which the attending physician gave ten grains of aspirin every three hours for five or six consecutive doses. The following night the patient became confused, looked at her daughter in amazement as if she failed to recognize her for a moment. She would alternately laugh and cry and on closing her eyes would jump as if startled. She had been deaf in both ears for a number of years and it was with considerable difficulty that her attention could be secured. She volunteered the information that she saw cats and dogs dart through before her eyes and heard numerous voices. When left alone she would become promptly abstracted, mutter to herself and attempt to remove the local applications from her arm. Twelve hours after the aspirin was stopped the mental picture cleared up and remained so since. In a case of subacute articular rheumatism two drams of salicylate of soda given in divided doses in twenty-four hours were sufficient to produce a delirium marked with visual and auditory hallucinations, anxiety with motor agitation. Twenty hours after the last dose of the salicylates no vestige of cerebral symptoms were to be found.

Considering the universal use and the therapeutic utility of bromids there should be no surprise that now and again we meet with delirious states caused by this drug as the following history shows: A young woman 28 years old was subject to nocturnal epilepsy which did not incapacitate her from earning her livelihood in a factory. For a period of two months her physician gave bromids four times a day; the dose could not be ascertained. When seen three days after the onset of the delirium, she was

confused, markedly somnolent, whining and crying a great deal. While awake she was restless, would attempt to move from one place into another, was ataxic and unable to walk without assistance. Her speech was thick, she had considerable difficulty in understanding simple questions and was distinctly paraphasic. She recognized the members of her family, knew that she was at home, but was uncertain as to time and recent occurrences. She complained of seeing strangers in the house and some men crawling under the bed and also heard noises that terrified her. At times these hallucinations could be reproduced artificially. She expressed some allopsychic ideas against her father. There was an acniform eruption on the face, the tongue was coated and breath offensive. About a week after the bromids were discontinued she was restored to her normal mentality.

Sporadic parotitis or mumps is by no means a rare affection and, as a rule, runs a benign course. Two out of three cases seen developed certain well defined cerebral symptoms of brief duration and terminated in recovery. In both cases mumps made its appearance first, followed by orchitis and it was during convalescence that the delirium supervened. Mr. C., age 34, married, mail carrier, good habits. Personal history not important. A maternal uncle is said to have been feeble-minded. In April, 1908, he had an attack of parotitis with moderate fever. On the fifth day the right testicle became involved. Both glands were in the process of resolution, when twelve days after the onset of the original disease, suddenly at 4 P. M. he became confused, restless, talked foolishly and urinated in the flower pots around the room. When seen for the first time he looked dazed, jumped out of bed, talked aloud with numerous purposeful gestures. He was elated and seemed to labor under considerable pressure. He said: "I am dead, a baby two years old knows more about it than I do. You can't understand it, that's the particular part of it. Now you know, now you don't, that's the particular part of it. You think I am talking foolish, that's the particular part of it, etc."

He was easily pacified and put to bed. Occasionally he would attempt to talk in the same strain but was readily controlled. He was well oriented and could give an intelligent account of his life and had retained his grasp on things in general. As long as his attention was retained he was rational and no disturbance of the psychic processes could be made out. That night he slept

with the aid of a hypnotic and the following morning was calm and composed and said in explanation, "I felt faint, a strange feeling came over me, I can't describe it. It seemed as if two opposite forces rushed into my head. I remember everything I said and did; knew how foolish it was, yet could not control myself." About four o'clock once more he became mildly excited but thirty-six hours after the inception of the mental symptoms he was well as usual and has followed his occupation ever since.

Two cases of protracted delirium at first thought seemed to belong to the infective-exhaustive group but as the cardinal symptoms of the latter affection were wanting they are included here as being toxic in nature. Drugs as far as could be ascertained played no etiological role.

The first case, a woman 27 years old, married, has been delicate and neurotic all her life. She was operated upon for pyosalpinx on Oct. 24, 1911. There was a subsequent infection with moderate fever. Two weeks later she was removed to her home where for a period of five weeks she was delirious, with vivid hallucinations. The most marked features were anxiety and apprehension with the fixed delusion that a certain man was hiding in the room contiguous to hers, who would sneak around under her bed, was in league with the nurse and meant bodily harm. She could hear the floor squeaking and felt that the bed would be lifted up as if in an elevator into several flights and lowered again. She was conscious of a certain species of fish crawling all over her body, which she would pick with her fingers and cast them aside, still was unable to see them. She spoke of having her feet in the mouths of two large fish, as a therapeutic measure adopted by her physician. She saw objects moving in the room and a diffuse green light permeating the entire house. On two occasions she described some trips to the sea-shore and also having had a ride in an automobile. Several attempts were made to reproduce these hallucinations without success.

When left alone she was enveloped in these hallucinations but could be easily aroused, was constantly found well oriented as to time, place and person, did not mistake the identity of those about her nor any difficulty of comprehension could be made out. The only physical abnormalities found were emaciation, sluggish bowels and insomnia. Under treatment the delirium subsided and she made a complete recovery. In an interview on April 1, 1912, she was able to give a full account of her experiences and

in a measure retrace some of the illusions that culminated into hallucinations.

The second case of delirium running a protracted course was seen in Mrs. D., aged 61, the mother of eleven children. She was operated on for gall stones in May, 1908. Following the operation, and several months thereafter, she became the prey of some fantastic and weird hallucinations. At first it was during the night that she could feel yards of rubber tubing come out of the wound, expand and then break off. Later huge masses of stone, nails, serpents and other animals would crawl out, grow into large dimensions and break off from her body. As soon as she tried to touch them they would vanish and in vain she would search for them in the bed and the room. Gradually they began to torment her even day-time. She could unmistakably feel those monstrosities sprouting out of her abdomen but was unable to palpate or see them. In her attempt to explain these hallucinations she would shift from one idea into another but otherwise there was no mental defect to be made out and her attitude towards her relatives remained unchanged. Gradually the false sense perceptions became less vivid and vanished eventually. She has enjoyed good health mentally and physically for the past three years.

In conclusion it may not be out of place to make a general survey of toxic deliria and point out some of the salient and diagnostic features. To begin with the mental symptoms are, as a rule, ushered in suddenly with no prodromata and are the result of some toxic agency. The predominating picture is one of confusion as if the patients were in a dream, out of which they can be transported into a rational state. There seems to be a mere lowering of consciousness but not to the extent of causing serious clouding or disorientation. They sink to this lower level by the presence and the dominance of hallucinations that are unusually vivid yet easily held in abeyance as long as the patient's attention is retained by talking or other stimuli. The hallucinations seem to have a predilection in affecting the tactile sensibility although the visual and auditory centers are often involved. In some cases it is possible to reproduce them artificially.

Delusional ideas play an unimportant role, they are usually changeable and fleeting and merely express the patient's efforts to interpret their morbid states. Furthermore, the emotional

tone is variable but seldom runs parallel with the hallucinations or the delusional contents and seldom exhibit the depth and intensity as seen in other psychoses.

In all cases of toxic deliria observed, there was retained some insight, they were partially cognizant of some abnormality in their condition and willing to coöperate.

Finally the prognosis has been invariably good when it was possible to remove the toxic agency with no tendency to recurrence.

SMALLPOX AND VACCINATION.

Presented at the Annual Meeting, April, 1912, of the Medical Society of the State of New York.

BY F. C. CURTIS, M. D.,
Albany.

The number of cases of smallpox in America in the last decade has been put at about 300,000, but I do not believe that represents one-half the actual number, for to my personal knowledge a great many have been so mild that they have not been recognized. I am sure that in this State it would be impossible to tell how many cases have actually occurred. The diagnosis has been questioned by the people and by physicians as well; more in the earlier years following the wide-spread prevalence of the current mild type which began in 1898.

It has been smallpox; because at the mildest it has the characteristics of smallpox; because from it unmodified smallpox has been contracted; because having had it protects one from smallpox; and because those recently vaccinated do not contract it.

Why it has been mild in this country while in some European countries it has been as severe as ever, no one has found a satisfactory answer to. Individuals and races vary in susceptibility to smallpox but territorial and climatic conditions do not affect its quality; epidemics, as with other infectious diseases, vary greatly in severity as was often noted in the 18th century, but a type has never been maintained. We know practically nothing of the conditions which determine the varying degrees of malignancy of smallpox. It is probable that a virus of

weakened virulence has been working; it has been widespread because being mild many have gone everywhere in the active stage of the disease without restraint. However, though generally mild, not a few have had it in the severest form and not less than 800 have died from it in this State since 1898. I have seen hemorrhagic smallpox taken from one who had it in so trivial form as to have entirely escaped detection. It has been maintained, and of this Hyde, of Chicago, was an advocate, that the general vaccination of the people has weakened the virulence of the disease; I would like to believe this but there is too much against it.

At the present time smallpox exists in other countries with all its oldtime severity, as will be shown by any recent United States Public Health Reports. In cities of Mexico and South America deaths are reported by the hundreds; Palermo, Italy, has lately had 412 deaths in 1,263 cases or a 25 per cent. mortality; Hong Kong reports 43 cases and 32 deaths; Russia, Spain and Turkey have epidemics with high mortality. In this country in one week in March there were reported 943 cases from sixteen states with only four deaths. If for ten or twelve years, all through the United States, there has been a mortality of one per cent., while in other countries there has continued to be a mortality of 25 per cent., and if the reason for this extraordinary fact is that we have been sufficiently isolated to have one strain of an attenuated virus at work among us, manifestly the possible entrance of a more virile virus is not so remote as to warrant indifference toward a disease which has eccentricities but which can never lose its significance.

Regarding the diagnosis of mild smallpox which often is not easy, there are three characteristic points which can be counted on, and I note them in the order of their diagnostic value; the initial fever or mode of onset; the distribution of the skin lesions; the morphology of the lesions. No other eruptive disease has a fever of onset, or possibly it may be a mere malaise, which lasts for three days and then subsides as the eruption appears; no other eruptive fever has a papular eruption which comes first on the uncovered skin, the face and hands, and is always most abundant there; no other has a papulo-vesicular eruption which develops in its entirety within twenty-four or forty-eight hours, so that all adjacent lesions are of the same age, and whose essential quality is that of a firm papule. I may add that no

exanthem can be as trivial in its manifestation as smallpox, a disease which can also be the most distressing. The wise course in every doubtful case is to admit the doubt and hold the subject in till the doubt is removed.

It is not possible that there should be diversity of opinion among medical men regarding the controlling power of vaccination over smallpox. History has told us that, among its other baneful effects, smallpox had an average yearly mortality of 600,000 before Jenner's time, and that at the very beginning of the 19th century there was a saving of nine-tenths of this number of deaths where his beneficent discovery came into use; while smallpox is now an unknown disease in countries civilized enough to have vaccination in universal use. Our own experience has told us that duly vaccinated persons do not take smallpox, no matter how exposed, and that it is our only safeguard when we personally come in contact with it. We vaccinate babies and send them to stay in smallpox hospitals along with their variolous mothers, perfectly certain that they may stay there for weeks with immunity. Among the triumphs which men of our profession have achieved over pestilences none has been more patiently worked out and more enduringly successful than that of this pupil of John Hunter over one which in historic importance ranks above all other epidemic diseases, and we honor Jenner above them all for giving to the world "the greatest discovery ever made for the preservation of the human species." "If there is any demonstrated proposition in this world," President Eliot has said, "it is that people by the millions are protected by vaccination, especially against death by smallpox."

There is something, however, to say to medical men about the subject of vaccination. Why is it that a century after this perfect prophylactic was discovered the extinction of smallpox has not been effected? In countries that are ignorant and backward to whom the gospel has not fully come, this may not be expected; but in civilized communities it ought to have been fully realized.

Can our governments guard the lives of the people with more care? We know what has been done under despotic governments. In 1816 Denmark forbade that anyone should be received by the clergy at confirmation, or be married, or be admitted to any school or apprenticed to any trade who had not had either smallpox or cowpox; and for six years there were only 158 deaths from smallpox in the whole Danish dominions, prior to

which deaths by the thousands had occurred in the city of Copenhagen alone. Bavaria ordained that every person above a certain age should be fined with an increasing penalty every year who failed to be vaccinated, and in eleven years there were only five deaths in the kingdom from smallpox. Germany is now showing the world what universal compulsory vaccination will accomplish, for smallpox is practically unknown and there is not a pesthouse in the kingdom.

In this State, since 1860, the law has required vaccination of all attending the public schools, and while its enforcement has been widely neglected it is my observation that the smallpox we have is chiefly among adults and foreigners to the State who have never been vaccinated.

I would not recommend more exacting legislation among our people, but I would maintain this law to the last degree, unchanged, for to lessen its force in any way would be a serious misfortune. It has been contested in court but to their honor the courts have, to the highest tribunal and without dissent, endorsed it. Yearly its repeal has been attempted in the Legislature, but that body has been appealed to in vain and it has stood as a measure for the common welfare. Thus New York has kept itself in line with a few of the more advanced states.

Vaccination has had its opponents from the outset. They have made much noise, and no doubt have had the sincerity of ignorance and narrow experience. Their arguments are altogether unscientific and appeal only to uninformed people. But it is my conviction that the devoted followers of anti-vaccination are comparatively very few. A speaker at the last hearing before the Public Health Committee of the Legislature claimed loudly that he represented 15,000 adherents to this faith in the United States; our perfectly justifiable rejoinder was that we represented many millions who are opposed to their contention. I believe it is true that in the last analysis the great body of the people believe in vaccination; to many, of course, there is indifference toward what does not seem a pressing need, but practically all thoughtful people accept it.

One thing which can be said to physicians is in connection with the forgetfulness and indifference of the people toward vaccination. As long ago as 1830, Dr. T. Romeyn Beck in the President's address before this State Medical Society on the very subject which I am presenting, says: "The most effective

obstacle to the extinction of smallpox is the inattention, indifference, the forgetfulness of the community to its character and consequences. When a nation enjoins for a few years exemption from it, a new generation springs up most of whom have never been secured from its attack." As was later said by Simon, "The very success of vaccination has blinded the people to its importance; it is easy to be bold against an absent danger, to despise the antidote while one has no painful experience of the bane." There is only one person who can overcome this forgetfulness of the people and that is the family physician. Fifty years ago I believe it was usual for medical men to remind people and to see that the babies as they came were vaccinated. But now it appears to me that the doctors themselves have forgotten about vaccination.

Another thing the profession can do is to lend the weight of its influence among the people toward enforcement of the school vaccination requirements. This is the safeguard against family neglect toward the baby. School trustees themselves are forgetful of the law but their indifference will be overcome if there is a public sentiment that is kept alive.

Are there any lingering doubts in the minds of the physicians regarding vaccination; are there any failures on the part of physicians to treat the procedure rightly? Questions come up: Why is the immunity from smallpox after vaccination sometimes short-lived; are ill results sometimes attending vaccination an essential element of risk; is vaccine virus free from adventitious morbid organisms; is there any material number to whom it is unsafe? And, is the procedure generally done rightly and cared for properly?

The purpose of vaccination is to induce the disease vaccinia, which calls into existence in the system the same elements of defense that are called out by variola, and effects the same immunity. How long will this last? I am sure that in a good many it lasts a lifetime. But we have reports of smallpox frequently where it is stated that the subject had been vaccinated only a few years previous. It is impossible to ascertain what sort of alleged vaccination was done, but I am confident that it was much of it spurious, and that the subjects did not have vaccinia.

Then, too, vaccination is discredited with the people by "bad arms" and while most of this abnormal result is due to post-

vaccinal infection, I would suggest that sometimes needless trauma attends the procedure of vaccination. It is not necessary to alarm the local nervous elements by prolonged scraping of the skin; instead I would simply make two linear tears through the scarf skin barely into the lymph spaces of the rete at the insertion of the deltoid where there is no under-lying muscle. I have admired the skill of the operators on the calf, who make with absolute precision parallel lines across the abdomen and flank without a break into the papillary capillaries. Following this, let the dried lymph be the only cover, protected only by a folded handkerchief pinned to the sleeve. No one who has seen the skin beneath a shield left on for several days, sodden with retained sweat and holding material which fell through the openings, will doubt as to their interference with normal vaccination if long retained. I also think that every vaccinator should have printed directions to give to the vaccinee as to the care that should be taken, such as has been prepared by the State Department of Health. The reasonable demands of this little surgical procedure are simple but exacting. Most of the ill results will be avoided if they are complied with.

Are there any unavoidable risks attached to the vaccine virus; is it possible to make a virus that is practically pure? Formerly when humanized virus was mostly in vogue, unless great care was used there was danger from pyogenic organisms or possibly from infection with human diseases; and when calf lymph came into general use the attendant rashes of twenty years ago were certainly toxic. But the slightly carbolized glycerin treatment of vaccine virus to-day has been elaborated enough to make it safe to say that practically only the resistant vaccine germs need exist in the offered product. All vaccine establishments are under government supervision; calves before use are kept under veterinary observation; they are scrupulously washed, shaved, fed only on milk, watched day and night in separate stalls with the hose in ready use, their lymph collected on the fifth day before suppuration, the animal autopsied, the lymph tested in the laboratory and bacteriologically for weeks and the market product subject to frequent test in government laboratories. The action of glycerin on all the attendant organisms has been studied and its control pretty well established. All human diseases are excluded, including tuberculosis which is not a calf disease; septicemic infection is fully obviated by the glycerin; tetanus

which is more resistant, gives the most concern, but in the post-vaccinal cases thus far occurring its vaccinal source has been satisfactorily excluded, the bacteriological test of all virus should arrest it, and in the many government tests of market virus its presence has never been found. People are ready to attribute any disorder coming within a year after to the vaccination, but this is, of course, unreasonable. Of the alleged deaths attributed to vaccination in the last twenty-five years the State Department of Health has found but one or two (and millions of vaccinations have been done in that time) which were attributable to vaccination. Three and a half million people were vaccinated in the Philippines without a serious mishap, and 6,000 deaths from smallpox were thereby prevented yearly. For several reasons I advocate the State manufacture of vaccine virus. Although generally pure, I have found virus from commercial establishments, in more than one instance, which contained a peccant organism. It should be free from the intermediate handling by middle men. It should be supplied gratuitously for use in public institutions and wherever the public interest demands. So long as vaccination is to a degree compulsory, the State should be able to guarantee the virus. The public will be more ready to accept vaccination if the virus comes from a State establishment.

As to there being any material number to whom vaccination is unsafe, while there is practically no bar to it in the face of exposure, I would prefer not to vaccinate those who are poorly nourished, having material chronic disease, diarrhea, or infectious diseases of the skin. Physicians ought to be conscientious in certifying to this and name the contra-indications; sometimes they are not.

Let us be alive to the potential gravity of the disease which vaccination has stayed and to the inestimable value of this greatest contribution of the eighteenth century to the welfare of the human race. Let the medical profession be alive to its responsibility for the control of what was once the greatest scourge of humanity.

THE TREATMENT OF SUMMER DIARRHOEA IN INFANTS.

BY HARRY RULISON, M. D.,

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With the hope of making this paper of use to the general practitioner, the author will omit the discussion of much of the research work which has been recently carried on in this subject, believing it to be of greater interest to the pediatrician and physiologist, than to those whose work is of wider scope.

The three prime factors in the causation of the summer diarrhoeas, are excessive heat, infections (enteric and parenteric), and improper feeding leading to metabolic disturbances. These causal factors are often interdependent; thus an infant taking a relatively clean milk may fall a victim to diarrhoea if the formula is not well adapted or if exposed to the summer heat of the city. Conversely, the same infant taking the same formula may thrive on a badly infected milk during the cooler months. It is interesting to note however, that the infant mortality in summer bears a closer relation to the temperature curve than to any other factor. This brings us to the consideration of milk infection. We are all prepared to admit that unclean milk may become and often is a source of diarrhoeal disorders, but its importance, while not to be minimized, has fallen considerably since we have come to recognize the part which certain disturbances of metabolism take in their production. Milk certification and pasteurization, although measures which are of indubitable importance, have failed to affect the rate of infant mortality during the summer months to a very noticeable degree.

Perhaps the greatest advance ever made in the scientific feeding of infants, especially in therapeutic feeding, is the work of Finklestein, L. F. Meyer and their associates. Through their discoveries we know that the diarrhoeas, especially the so-called "cholera infantum" are not merely intestinal infections, but cell injuries causing perversions of metabolism so profound as to affect the entire economy. Basing his technique on the teaching of these observers, with some slight modifications of his own, the author is enabled to report that during his service (August and September, 1911) at the feeding clinic of the South End Dispensary, there was no mortality although the service was large. The method he employs is as follows:

If the case is seen early, castor oil (5*i*-ii) is administered if food remnants appear in the stool. In later cases and in those cases accompanied by watery stools containing no curds this is omitted and the colon is flushed out copiously with a weak sodium bicarbonate solution (0.5-1%) or with Ringer's solution. These irrigations should be repeated once daily if blood and mucus continue in the stool. Calomel should not be used unless there should be present some contraindication to the oil, such as repeated vomiting following its administration. Calomel acts more slowly and depends for its antiseptic action, if it has any, upon the formation of the bichlorid in the intestine. Its administration is frequently followed by blood in the stools and other evidences of irritation. All food should be immediately withdrawn and the child is given sterile water or very weak tea sweetened with saccharine for twelve to twenty-four hours. Some objection on the part of the mother may be encountered to instituting this starvation period, but usually the baby will seem so much more contented on the simple water diet than on its regular food that she speedily becomes satisfied to continue. It should be noted that no carbohydrate (neither any of the sugars nor barley-water) is used in this preliminary fasting, for reasons which will appear later.

It is the writer's belief that there is little to be gained by prolonging the fasting period over 24 hours, and in some of the more severe cases, especially in atrophic infants, a sharp drop in the temperature curve below normal will result, followed by collapse and death. At the end of the fasting period, we must prescribe some food and on its proper choice hinges the success or failure of our treatment.

Until very recently it has been the practice in this country to still withhold milk, placing the infant on cereal decoctions at this stage of the treatment, on account of their supposed soothing effect on the intestinal mucosa and because of the fact that casein and fat were supposed to throw more work on the digestive organs than carbohydrate. As a matter of fact it has been shown that practically all cases of summer diarrhoea in infants depend on fermentation in the intestine. The stools are very acid and the bacterial flora will consist largely of the fermentative group. It seems rational to assume then that the feeding of cereal gruels sweetened with one of the sugars cannot act otherwise than to favor fermentation and thus prolong the diarrhoeal

process and the writer's experience would seem to confirm this. As fermentation and putrefaction are antagonistic processes, each accompanied by a distinct bacterial flora, Esheric suggested the possibility of substituting one for the other by a complete change of the culture medium or, in other words by substituting proteid for carbohydrate in the diet or conversely. In this instance we supply proteid in the form of casein. This may be accomplished by feeding dilutions of skimmed milk (the bottom milk after skimming the upper six ounces from a quart) or what is still more rational, buttermilk which is both fat and sugar-free. To my mind, the only advantage in feeding the so-called "acid milk" made with butter-milk tablets lies in the fact that it is sugar free and it seems to me that its routine use is utterly irrational. In my own practice I have usually fed the skimmed milk dilutions which should preferably be boiled not only because boiling increases the well known "constipating" tendency of the casein, but also as Brenneman has shown, curds are much less likely to appear in the stool. The food mixture may be sweetened with saccharine. The feedings should be small at first and the intervals short; the quantities being rapidly increased and the intervals lengthened as the case progresses. Water should be given abundantly. After a few days, provided there is no vomiting, fat is cautiously added (less cream is removed) until the desired percentage is reached: then barley, rice, or arrow-root may be added, without the addition of the salt which is usually called for in the formulae for such decoctions, more than enough of the inorganic salts being supplied by all milk dilutions containing more than one-third milk. For this reason whey is harmful in certain cases as it contains practically all the salts of the cow's milk or more than three times the quantity contained in human milk. (It has been recently demonstrated that the preservation of the normal salt balances is of the utmost importance.) Sugar is finally added to the formulae and gradually increased. In the addition of both sugar and starch one must proceed with the utmost caution, as these infants will often show an intolerance for one or more of the carbohydrates long after the stools assume their normal character. In some cases it is of advantage to substitute one sugar for another. Malt sugar is the most assimilable and least liable to undergo fermentation, but it should be remembered that it acts as a decided laxative to many infants.

In the case of breast-fed infants, the same procedure is to be followed through the fasting period. Diluted breast milk should then be given. This may be accomplished either by pumping the breasts into sterile containers, diluting and feeding, a method much in vogue among German pediatricians, or less accurately by allowing the child to take the desired amount of saccharine-water from a bottle before putting it to the breast where it is allowed to remain less than the usual time. Wet nursing is of course the procedure of choice in the case of the child which has been artificially fed previous to the illness, where this is possible. The results to be expected are as follows: During fasting, the child is usually much quieter, often stops fretting and may sleep for a considerable length of time. There is a fall in the temperature curve. The frequency of the stools is diminished steadily together with the straining and tenesmus. The stool becomes smaller in bulk, dark in color and may contain considerable mucus, the so-called starvation stools. Toward the end of the first 24 hours, the appetite usually returns if it has been previously lost. When this occurs a more rapid recovery often takes place so that I have come to regard it as of some prognostic import. The first twenty-four hours on the boiled skim milk may be attended by constipation after which the stools may become putty-like in color and consistency and of a distinctly putrefactive odor (fat-soap stools) this is most apt to occur in the less severe cases and is to be regarded as a favorable sign. In other cases there may be frequent small stools which contain many small soft friable curds. This may indicate that the fat, if any has been left in the food, is causing a disturbance, but more often it means that the infant is under fed and gives us a cue to increase the formula.

The more severe cases, including dysentery and the so-called cholera infantum will not always yield to so simple a method of treatment. In such cases the casein milk of Finkelstein will often prove to be of value. On account of the difficulty of its preparation, it has not been used very extensively in private practice. Recently however the nurses of the Albany Guild have made some excellent preparations of this food under my directions and have furnished it to private patients at a moderate cost.

The treatment of this class of diseases by drugs is secondary in importance to the dietetic and hygienic measures, I believe that

intestinal antiseptics are of doubtful value. Of such drugs Bismuth salicylate is probably the most efficacious, but I cannot claim to have seen any positive results from the use of any of them. When as a result of frequent vomiting and watery evacuations, the tissues are becoming dehydrated, opium should be used in some form. It should be prescribed separately so that it may be easily controlled. Bismuth is useful in most cases. The subcarbonate is the preparation of choice and it should be given in large doses (gr. xv-xx q. 2-3.h) to be effectual. The tannic acid derivatives seem to be less serviceable during infancy than in later life, but I have occasionally seen good results from the use of tannalbin and bismuth subgallate.

Threatened collapse is best met with by the liberal use of caffein, camphor and alcohol. When the tissues become dehydrated Ringer's solution should be given freely under the skin. Attention to the hygiene is a much neglected part of the treatment. The clothing should be light, the patient should be protected from the heat and kept cool by frequent sponging, and kept in the open air when practicable. The crib should be carefully screened from flies which are probably responsible for many of the cases. The therapeutic value of bettered hygienic conditions cannot be too strongly emphasized and the success of any system of treatment will depend very largely on their observance.

A PLEA FOR EARLY DIAGNOSIS IN SURGICAL AFFECTIONS.

Read before the Medical Society of the State of New York, April 17, 1912.

BY ALVAH H. TRAVER, M. D.

It is becoming more and more an age of specialists, and I think rightly so; for a physician who studies a special class of cases and sees a greater number of these cases, becomes more proficient in making a diagnosis or in performing the necessary operation, than the general practitioner who sees but one or two of these cases during the year.

There is a strong feeling among general practitioners that a doctor doing surgery should treat surgical cases only. A surgeon would not be expected to treat typhoid or pneumonia,

for instance, yet the general practitioner treats appendicitis or tumors and decides for himself when it is necessary to refer the case to the surgeon for operation. Should the general practitioner treat cases of appendicitis or tumors, when every physician knows that there is no known medicine that has the least effect upon the growth of a tumor or an inflamed appendix, except, perhaps, physic to do it harm? Ought not major surgical cases to be treated, at least in consultation, with a surgeon? Is it fair to the surgeon to be called to see a case of appendicitis after peritonitis has developed, and so have a high mortality following operation? or to have cases of cancer of the breast sent to him after the axillary glands have become involved, and so get a small percentage of permanent recoveries? Is it fair to the public to make them believe that cancer is sure to return, when it is not that it returns but rather that it has already developed so far at the time of operation that it cannot be completely removed? Is it fair to make people fear appendicitis operations because of their present too high mortality rate following operations, when you and I know that there is practically no mortality if operation is performed before the infection has spread beyond the appendix?

Dr. Wm. Mayo says: "The layman requires considerable explanation before he can be made to realize that the risk is not in surgery but in delayed surgery." Dr. Murphy says: "A case of ruptured appendix is one improperly treated, for it should have been removed before it ruptured."

It is seldom that a case of appendicitis dies following operation if the operation is performed while the infection is still localized within the appendix. In looking over my case records for the past thirteen years, I find but two cases which died following operation, in which the appendix was not ruptured at the time of operation. One case died of pneumonia, while the other case was operated on in a farm house some distance from his physician, and died suddenly about sixteen hours after operation. The cause of death was not known. The records also show that there were two physicians for whom I have operated on eighty-six cases of appendicitis with no mortality, while for a third I have operated thirteen times and with four deaths. I am willing to admit that, in the eighty-six cases of appendicitis with no mortality, there may have been some in which an operation may not have been absolutely neces-

sary, but in the case of the third physician there was no question about the necessity of the operation, as he did not refer the cases to me until the appendix was ruptured and peritonitis was developing. Let me ask you the question, which of these physicians would you prefer to treat your family, one who may be over anxious and have no mortality, or the one who delays operation until the appendix is gangrenous, and has one case in three die? Let me put the question in another way. If you had appendicitis would you have the operation performed early when there is practically no danger, or would you delay until there is a danger of peritonitis, fecal fistula, intestinal adhesions, and possibly death? Dr. Richardson says: "Take a case of acute appendicitis; have we not demonstrated beyond dispute, what the progress is cannot be accurately told in any case, and has not the medical and surgical world become convinced, therefore, that the only safe course is earliest possible operation?"

While on the subject of appendicitis, let me quote to you one year's mortality rate of appendicitis in the city of Berlin, showing the death rate in relation to the time elapsed before operation was performed.

Cases operated on within 24 hours	.09% mortality,
" " " during the 2nd day	7. % "
" " " during the 3rd day	10. % "
" " " after the 3rd day	22. % "

In view of these figures, one can hardly see how any physician can delay operation when less than one case in one hundred die if operation is performed during the first twenty-four hours, while if operation is delayed until after the third day, twenty-two cases out of each one hundred die. Would you wait if it were one of your family who was suffering with appendicitis?

Another condition in which early diagnosis and early operation is imperative is acute intestinal obstruction. In this condition, as in acute appendicitis, the greatest harm is done by the administration of cathartics. In a suspected case of acute intestinal obstruction stop all food by the mouth, wash out the lower bowel, feed by nutrient enemata, and carefully examine your patient. You may find a small hernia which has become strangulated and is causing the obstruction, or you may find that the patient may have had previous attacks of peritonitis, or had a previous operation which would point toward intestinal adhesions. But if you

are in doubt, have exploratory operation performed. If surgeons with the experience of the Mayos or Ochsner find it necessary to make exploratory incisions in order to arrive at a definite diagnosis, we surely should not think it a disgrace to do likewise. One cannot emphasize this truth better than has Dr. Ochsner, so I will quote from his *Surgery*. He says: "A statement which should be repeated many times and always regarded when any form of intestinal obstruction is considered, and even when there is the slightest suspicion of the possibility of the existence of intestinal obstruction in any given case, is that it is absolutely unpardonable to give either cathartics or any form of nourishment by mouth. In our own experience the mortality has been ten times higher in patients who have been given cathartics before coming to the hospital suffering with intestinal obstruction, than in those who have received none." So instead of waiting and giving strong cathartics, thereby destroying the vitality of the intestine, carefully examine your patient to determine if obstruction exists, and, if there is any suspicion of its existence, have operation performed early. If you find an obstruction present you can save your patient; if you find you have been mistaken, you have done your patient no great harm. I would rather admit I had operated when it was not necessary than to admit that my delay was the cause of the patient's death.

Cancer of the breast is another condition in which early diagnosis is very necessary. While it is not necessary that a diagnosis be made within twenty-four or forty-eight hours, as in the case of acute intestinal conditions, yet it is essential that diagnosis be made before the lymphatic glands become involved.

All surgeons have had cases referred to them with a history as follows: "Mrs. A. first came to me about six months ago with a small tumor of the breast. Since then I have examined her several times in the endeavor to determine whether or not it was a cancer. I now find the axillary glands slightly enlarged and I think an operation is necessary." The physician has arrived at a correct diagnosis, but in his delay in endeavoring to arrive at too exact a diagnosis, he has allowed to pass the favorable time for operation. All tumors of the breast are dangerous and a large percentage are malignant. Dr. Parker Syms says: "The time has passed when the doctor, in his ignorance, may advise his patient that a tumor of the breast is of no significance unless it shows active signs of malignancy." Dr. Ochsner says:

"Accepting the general statement that there is a tendency in all tumors of the breast with the exception of lipoma, to become malignant later in life, it consequently seems wise to remove every benign tumor in this locality as early as possible after it has been diagnosed. The operation is safe, it does not inconvenience the patient and may relieve her of a very serious danger."

Dr. Judd says: "One-half of the cases that come to operation come too late because they are being watched by their home doctors." In waiting to make a positive diagnosis, we make it impossible to cure over twenty-five per cent. of the patients, while, if operated on early, all cases of non-malignant tumors are cured, and, approximately eighty-five per cent. of the malignant." He also states that eighty-five per cent. of all tumors of the breast are malignant to begin with and, it is estimated, that one-half of the remaining fifteen per cent. will become malignant if the patient lives.

Let us keep these figures in mind and when the next case of tumor of the breast comes for examination, let us decide if it is safe to delay operation in view of the fact that eighty per cent. to ninety per cent. of all breast tumors are malignant, and that in a case in which a clinical diagnosis is positive, it is not a case in which operation can promise much, as only twenty-five per cent. can be cured with the most radical operation when the axillary glands can be palpated. But it is for the suspicious case that operation can promise much, for, if it is cancerous, eighty per cent. can be cured, and even if it proves to be non-malignant, they are better out, for what guarantee have we that they would not become malignant if left in.

The census report shows that cancer of the breast caused 7,000 deaths in the United States in the year 1910. In view of this horrible mortality we, as physicians, must endeavor to do something to reduce this scourge. As for myself, I think that the operation for cancer of the breast, as it is performed to-day, is about as thorough as it ever can be done, so little can be hoped for in the direction of reducing the mortality by a more complete operation. Or to use Dr. Murphy's words: "If there is any hope to be expected from operation for carcinoma of the breast beyond what we now realize, it is this, that we must recognize the tumors earlier and remove them promptly."

Great good can be done if patients can be made to consult their

physicians as soon as a tumor is discovered and if their physicians would advise that every breast tumor be removed at once. How can patients be made to consult their physicians as soon as the tumor is discovered? *First*, teach the public that eighty per cent. of all breast tumors are cancerous, and that all tumors that are not cancerous are cured by operation, and, even if they are cancerous, eighty-five per cent. can be cured if operation is performed early. *Second*, let the public know that the reason why cancers return is not so much that they return, as it is that, at the time of operation, they have extended so far that they cannot be completely removed.

How can physicians be made to send their cases for early operation? Repeat it again and again that all tumors are better out, that about eighty per cent. of tumors of the breast, for instance, are cancerous but about eighty-five per cent. can be cured if operated on early, while only twenty-five per cent. can be cured, if operation is delayed till the glands are infected. Would it not have a good effect if the surgeons refused to operate on the far advanced cases of cancer; for by so doing, the physician would learn that the cases must be sent early if operation is to be performed, and the public would blame them if they delayed, and at the same time, patients would learn that they must take their physicians' advice to have operation done early, for there is little hope of recovery by a late operation. By so doing our percentage of *Returns* would be greatly reduced and patients would soon learn that a cancer is not a hopeless condition if attended to early.

The way in which the public has awakened to the necessity of some active measures to stop the spread of tuberculosis clearly demonstrates its willingness to co-operate with physicians in measures to improve the public health. Would it not be good to bring to the attention of the public, by magazine and newspaper articles, that the United States census shows that in 1910 cancer of the breast caused 7,000 deaths; that cancer of genito-urinary organs caused 11,000 deaths; that the New York State health reports show that cancer caused 8,000 deaths in this state during the year 1911? If these facts could be generally known would not the public awaken to the fact, as they have in tuberculosis, that the case must be treated early in order to give any hope of recovery?

The largeness of my subject of necessity prevents my speaking

of all the surgical diseases in which an early diagnosis is of the greatest benefit, but I have chosen a few of the more common diseases in which a delayed diagnosis causes the greatest danger to the patient. I have not said anything new in this paper, and probably nothing but what you already knew, yet I have endeavored to bring known facts to your attention in such a manner as to make you appreciate that it is the general practitioner who usually sees the case early, and on him rests the responsibility of making an early diagnosis or, in case of doubt, the necessity of calling consultation to aid in arriving at any early diagnosis, for it will be by earlier operation rather than by more radical operation that we can do most to reduce the death rate in surgical diseases.

Editorial

As, notwithstanding all his precautions, it was not impossible that some of his household might be attacked by the distemper, he took care to provide proper remedies; and to Blaize's infinite delight, furnished himself with mithridates, Venice treacle, diascordium, the pill rufus (oh! how the porter longed to have the key of the medicine chest!), London treacle, turpentine, and other matters. He likewise collected a number of herbs and simples; as, Virginian snakeweed, contrayerva, pestilence-wort, angelica, elicampane, zedoary, tormentil, valerian, lovage, devils-bit, ditany, masterwort, rue, sage, ivy-berries, and walnuts, together with bole ammoniac, terra sigillata, bezoar-water, oil-of-sulphur, oil of vitrol, and other compounds. His store of remedies was completed by a tun of the best white-wine vinegar, and a dozen jars of salad-oil.

Old St. Paul's.

W. HARRISON AINSWORTH.



Dr. A. M. Stimson has contributed to the publications of Public Health and Marine-Hospital Service a statistical summary of the facts of rabies in the United States during the year 1911. This is supplementary to a report made in 1908, and reveals some interesting facts. Rabies has been such a rare disease that competent practitioners who have never seen its manifestations have been in doubt of its existence, and there are probably a few who still hold this uncertainty.

Some difficulties have been experienced in collecting statistics of this kind, and they are necessarily incomplete; but comparison of the statistics of 1911 with those of 1908 appears to establish some very definite conclusions. Thus, there are reported 98 deaths in man for the year 1911, and 111 fatalities in 1908; the former were reported from 1,381 infected localities, and the latter were reported from 534 infected localities. There were 4,625 persons treated in 1911, and 3,393 rabid animals recorded for the same year. This shows that in spite of the increased distribution in the lower animals there has been a diminution of the human deaths, amounting to nearly twelve per cent, and this is to be ascribed to a much more widespread use of antirabic inoculations. Of ninety-four human cases, 59 were cured in persons under twenty years of age; in 65 cases, the period of incubation was less than four months, in all but eight patients, the average being 49 days. August was the month of greatest activity of the disease.

Dr. Stimson derives from these cases the fact that if the number of treated persons was in the same proportion for which the data were not given, the total death rate in persons taking the treatment would be eight-tenths of one per cent. One-third would be due either to delayed treatment or to too short incubation periods to permit of immunization.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JULY, 1912.

Deaths.

Consumption	23
Typhoid fever	2
Scarlet fever	5
Measles	0
Whooping-cough	0
Diphtheria and croup	0
Grippe	0
Diarrheal diseases	22
Pneumonia	1
Broncho-pneumonia	1
Bright's disease	17

Apoplexy	10
Cancer	9
Accidents and violence.....	12
Deaths over 70 years.....	22
Deaths under 1 year.....	22
<hr/>	
Total deaths	164
Death rate	19.30
Death rate less non-residents.....	15.88

Deaths in Institutions.

	Non- Resident.	Resident.
Albany Hospital	15	8
Albany Orphan Asylum.....	0	0
Child's Hospital	0	0
County House	3	1
Home for the Friendless.....	0	0
Homeopathic Hospital	5	3
Hospital for Incurables.....	1	0
House of Good Shepherd.....	1	0
Little Sisters of the Poor.....	1	0
Public places	2	1
Penitentiary	0	0
Sacred Heart Convent.....	1	0
St. Margaret's House.....	3	4
St. Peter's Hospital.....	4	3
Austin Maternity Hospital.....	1	0
Albany Hospital, Tuberculosis Pavilion.....	5	4
Labor Pavilion	0	0
<hr/>		
Totals	42	24

Births	139
Still births	5
Premature births	5

BUREAU OF CONTAGIOUS DISEASE.

	-
Cases Reported.	
Typhoid fever	12
Scarlet fever	0
Diphtheria and croup.....	7
Chickenpox	1
Measles	31
Whooping-cough	0
Consumption	39
<hr/>	
Total	90

Contagious Disease in Relation to Public Schools.

None reported.

Number of days quarantine for diphtheria:

Longest..... 15 Shortest..... 6 Average..... 10 1/6

Number of days quarantine for scarlet fever:

None.

Fumigations:

Houses..... 29 Rooms..... 155

Cases of diphtheria reported..... 7

Cases of diphtheria in which antitoxin was used..... 6

Cases of diphtheria in which antitoxin was not used..... 1

Deaths after use of antitoxin..... 0

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	21
Negative	13
Failed	0
Total.....	34

Living cases on record July 1, 1912..... 359

Cases reported during July:

By card	26
Dead cases by certificate.....	9
	—
	35

394

Dead cases previously reported.....	14
Dead cases not previously reported.....	9
Duplicates	9
Lost track of.....	13
Recovered	10
Removed	17
Died out of town.....	4
	—
	76

Living cases on record August 1, 1912..... 318

Total tuberculosis death certificates filed during July..... 23

Out of town cases dying in Albany:

Albany Hospital Camp.....	3
Pavilion of Labor.....	1
Albany Hospital	1
St. Margaret's House.....	1
	—
	6

Net city tuberculosis deaths..... 17

REPORT OF VISITING TUBERCULOSIS NURSE.

Cases remaining under supervision.....	5
Cases assigned	30
Cases referred to Albany Guild Nurse.....	7
Number died	5
Gone to hospital.....	3
Left city	5
Not located	2
Not tuberculosis	1
Cured	1
No nurse wanted.....	2
Nurse not required.....	4
	—
Number of calls old and new cases.....	30
	40

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	4
Initial negative	66
Release positive	8
Release negative	14
Failed .. .	1
	—
Total.....	93
Test of sputum for tuberculosis:	
Initial positive	21
Initial negative	16
Failed .. .	2
	—
Total.....	39

BUREAU OF MARKETS.

Market reinspections	162
Public market inspections.....	25
Fish market inspections.....	4
Rendering plant inspections.....	4
Slaughter house inspections.....	8
Hide house inspections.....	4
Pork packing house inspections.....	3

MISCELLANEOUS.

Mercantile certificates issued to children.....	12
Factory certificates issued to children.....	18
Children's birth records on file.....	30
Number of written complaints of nuisances.....	52
Privy vaults	5
Closets .. .	6
Drains .. .	4
Plumbing .. .	5
Other miscellaneous complaints.....	27
Cases assigned to health physicians.....	75
Calls made .. .	174

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR JULY, 1912.—Number of new cases during month, 156; classified as follows: Dispensary patients receiving home care, 26; district cases reported by health physicians, 2; charity cases reported by other physicians, 43; moderate income patients, 74; metropolitan patients, 11; old cases still under treatment, 91; total number of cases under nursing care during month, 247. Classification of diseases for the new cases: Medical, 52; surgical, 4; gynecological, 3; obstetrical under professional care, mothers, 41; infants, 41; eye and ear, 0; skin, 2; throat and nose, 0; dental, 0; infectious diseases in the medical list, 13; surgical list, 0. Disposition: Removed to hospitals, 4; deaths, 7; discharged cured, 119; improved, 10; unimproved, 6; number of patients till remaining under care, 101.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 1; nurses in attendance, 1; patients carried over from last month, 0; new patients during month, 1; patients discharged, 0; visits by head obstetrician, 0; visits by the attending obstetrician, 0; visits by students, 0; visits by nurses, 0; total number of visits for this department, 0.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,145; for professional supervision of convalescent, 466; total number of visits, 1,611; cases reported to the Guild by two health physicians, and forty-three other physicians; graduate nurses 8, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 66; new patients, 115; old patients, 283; total number of patients treated during month, 398. Classification of clinics held: Surgical, 13; nose and throat, 6; eye and ear, 8; skin and genito-urinary, 6; medical, 11; lung, 4; dental, 0; nervous, 1; stomach, 0; children, 11; gynecological, 6.

AMERICAN THERAPEUTIC SOCIETY.—On recommendation of the Council of the American Therapeutic Society, at the annual meeting of the Society held in Montreal, Canada, June 1, 1912, it was voted that prizes of two hundred and fifty, one hundred and fifty and one hundred dollars be awarded to the best reports on subjects relating to Therapeutics on the following conditions:

1. The competition is to be limited to qualified physicians in the United States and Canada.
2. The subject of the competition is to be limited to a substance or preparation which is official in the United States Pharmacopoeia.
3. The research may be wholly laboratory or clinical, or laboratory and clinical combined, and must be conducted in a public institution.
4. The reports must be (a) designated by a distinctive word or motto and (b) must be accompanied by a sealed envelope marked with the said word or motto, and containing the name and address of the competitor.

and of the laboratories or hospitals in which the research was conducted. (c) The report and protocol must be typewritten. (d) These must be in the hands of the chairman before April 1, 1913.

5. The reports and protocols are to be judged by a committee consisting of the three Vice-Presidents of the Society, who shall decide which are the best reports as showing valuable therapeutic research, and shall return their decision together with all the papers submitted to them, to the Chairman of the Council of the Society before May 1, 1913.

6. The Chairman of the Council shall then return the unsuccessful reports to their authors, and shall notify the successful author or authors.

7. The successful report or reports shall be read by the author, or a designated member of the Society on the first day of the meeting of the Society, immediately after the President's address.

8. All matters connected with the competition shall be considered as absolutely confidential by the Chairman of the Council and the Judges, except as to the successful competitors.

9. The Vice-Presidents as judges may fail to award any prize if the report or reports entered in the contest are not found to be of a sufficiently high standard.

10. In case any Vice-President shall fail to act, the President and the Society shall designate a substitute.

CAMPAIGN OF EDUCATION.—The State Health Commission has appointed the following women physicians of the state as special lecturers to carry on a state-wide campaign of education among women and girls on the subjects of hygiene and prevention of disease. The lecturers' names are Drs. Adelaide Dutcher, Syracuse; Rosalie S. Morton, New York City; E. Hamilton Muncie, Brooklyn; Lucie E. Heaton, Canton; O. M. Grover, Dunkirk; Mary H. Potts, Elmira; Agnes E. Page, Albany; Cora B. Lattin, Ithaca; M. May Allen, Rochester; Ina V. Burt, Phelps; Mary G. Day, Kingston; and Angeline Martine, Utica.

A BILL TO AMEND THE PURE FOOD AND DRUG LAW.—The Interstate Commerce Committee has favorably reported the bill of representative Shirley to amend the pure food and drug act. This measure prohibits "false and fraudulent" curative claims on labels. It seeks to meet the decision of the Supreme Court that the putting forth of false and extravagant claims regarding the curative powers of medicine was not in violation of the pure food law.

SANATORIUM OPENED.—The Schenectady County Tuberculosis Sanatorium, Glen Ridge, was formally opened, August 3. The sanatorium has been erected at a cost of about \$60,000 and will accommodate about forty patients.

LEPER FOUND IN BUFFALO.—A Russian immigrant who was under observation in New York and thence was traced to Cleveland, Ohio, Bay City and Ann Arbor, Mich., was found in Buffalo, July 21 and has been isolated. Bacteriologic tests are said to have confirmed the diagnosis of leprosy.

DENTIST IN THE ARMY.—The Surgeon General of the Army announces that examinations for the appointment of acting dental surgeons will be held at various places throughout the country on Monday, October 7, 1912. Applicants must be between 21 and 27 years of age, citizens of the United States, graduates of authorized dental schools, and of good moral character and habits. Acting dental surgeons are employed under a three years' contract at the rate of \$150 per month. After this period they may be promoted to the grade of dental surgeon with the rank of first lieutenant and with the pay and allowances pertaining to that rank. Application blanks and full information concerning these examinations can be procured by addressing the "Surgeon General, United States Army, Washington, D. C."

TRAINED NURSE, PHILIPPINE SERVICE.—The United States Civil Service Commission announces that the examinations for trained nurse in the Isthmian Canal and the Indian services will be held on October 16, 1912, as scheduled, but that the announcement of the examination for this position in the Philippine service is cancelled because of advice from the Bureau of Insular Affairs that future vacancies in this position in the Philippine service will likely be filled by Filipino women.

INFANTILE PARALYSIS.—Since July 1, eighty-six cases of infantile paralysis have been reported in Buffalo, N. Y., the disease being widespread throughout the city. An odd point brought out is that there has been no occurrence of two cases in any one family. Many of the cases have been of comparatively mild type and only six deaths had occurred up to August 7th. The State Commissioner of Health has requested the assignment of an expert from the Public Health and Marine-Hospital Service to assist in investigating the situation. In Los Angeles, Cal., also the disease is epidemic, one hundred twenty-eight cases having occurred there since July, 10, with thirty-three deaths. A number of cases have been reported from Baltimore, Md. also.

TUBERCULOSIS DAY.—Churches and religious societies to the number of at least 100,000 are urged to give special attention to the prevention of tuberculosis on Sunday, October 27, or on some day during the week preceding or the week following that date. This season has been set apart and designated as the Third National Tuberculosis Day by the National Association for the Study and Prevention of Tuberculosis.

Tuberculosis Day was originally set on April 28th, but was postponed because of a conflict with Conservation Sunday of the Men and Religion Forward Movement, which was held on that date. The observance of Tuberculosis Day in the Fall this year will be utilized by anti-tuberculosis workers not only for the general education of churchgoers on consumption, but also for the purpose of interesting them in the sale of Red Cross Christmas Seals.

Every one of the 600 and more anti-tuberculosis associations, allied with the National Association, are urged to promote Tuberculosis Day in their respective communities. While last year over 50,000 churches

observed this occasion, it is expected this year that the number will be doubled. Millions of circulars and other forms of literature will be distributed. The support of every religious denomination will be asked for.

That tuberculosis is a serious problem among church congregations is evidenced by statistics which the National Association gathered last year, which show that ten per cent of all deaths among church members are caused by tuberculosis. Based on these figures and on the mortality statistics of the Census Bureau, over 52,000 of the 33,000,000 communicants in churches in the United States die from tuberculosis every year. This figure assumes that the death rate of 1.60 per 1,000 population in the Registration Area applies to all churchgoers, when, as a matter of fact, the rate would probably be higher.

INDUSTRIAL DISEASES IN THE UNITED STATES.—The failure of the national and state governments to protect workmen from preventable diseases of industry is strikingly brought out in a report of the Second National Conference on Industrial Diseases. It was shown that in three years the Illinois Commission found 578 cases of lead poisoning in that state and that a hasty and incomplete study disclosed 121 cases of this one disease in New York City alone. Many of these were due to the absence of regulations requiring the use of simple protective devices and practices which, it is pointed out, are in general use in Germany and England under legislation providing for the payment of insurance benefits in the case of sickness directly due to industry.

CONFERENCE OF THE AMERICAN HOSPITAL ASSOCIATION.—The fourteenth Annual Conference of the American Hospital Association will be held at the Pontchartrain Hotel, Detroit, Michigan, September 24, 25, 26 and 27.

PERSONAL.—Dr. FRANK A. KELLER (A. M. C. '96), has returned from Changsha, Hunan, China and is practicing at Fort Plain, N. Y.

DIED.—Dr. MILES G. O'REILLY (A. M. C. '74), of Fishkill Landing, N. Y., died of pneumonia in the Newburgh Hospital, July 11, aged 60.

—Dr. ADAM WALRATH (A. M. C. '79), of St. Johnsburg, N. Y., died at his home August 7, aged 60.

—Dr. WILBUR F. LAMONT (A. M. C. '89), a member of the Medical Society of the State of New York and a practitioner of Catskill for twenty-three years, died in the Albany Hospital, August 1, from pernicious anemia, aged 49.

Current Medical Literature**REVIEWS AND NOTICES OF BOOKS**

A Compend of Genito-Urinary Diseases and Syphilis Including Their Surgery and Treatment. By CHARLES S. HIRSCH, M. D., Philadelphia: P. Blakiston's Son & Co., 1912.

The second edition of this book is much more complete than the first. The new matter relates to the biological characteristics of the Spirochaeta pallida, the serum diagnosis of syphilis and the treatment of syphilis with Salvarsan. Considerable space is also given to the use of bacterins and to the operations of epidymotomy, vasotomy and the fulguration treatment of vesical papillomata.

At the end of the book selected formulae of use in the treatment of genito-urinary ailments will be found.

The book deals with such a wide range of topics relating to this specialty that only brief reference can be made to many points which need greater elaboration in order to be of value to the general practitioner. It should, however, prove of value to students preparing for examination.

H. W. C.

Compendium of Diseases of the Skin Based on an Analysis of Thirty Thousand Consecutive Cases with a Therapeutic Formulary. By L. DUNCAN BULKELEY, A. M., M. D., Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital; Consulting Dermatologist to the Randall's Island Hospital, to the Hospital for Ruptured and Crippled, and to the Manhattan Eye and Ear Hospital, etc. Fifth Revised Edition of the Manual of Diseases of the Skin. Svo., cloth, 300 pp. \$2 net. (Sent prepaid on receipt of price.) Paul B. Hoeber, Medical Publisher, Bookseller and Importer, 69 East 59th Street, New York, 1912.

This book is in reality a revision of the Manual of Diseases of the Skin, of which four editions have been printed, the last one fourteen years ago. It has been the aim of the author to present clearly and simply the essential points in the description, etiology, diagnosis, prognosis and treatment of the diseases of the skin. This aim has been admirably achieved. The absence of qualified statements and discussion of points still unsettled is gratifying. The classification adopted is a modification of the one published by Hebra and is easily understood. The table of statistics of 30,000 cases gives valuable information as to the relative frequency of the various skin diseases.

The conservative attitude of the author toward salvarsan is commendable—"although often yielding brilliant results temporarily, it has by no means fulfilled the great expectations put forth. The year and a half of its trial is too short a period to determine its real value, and as time goes on evidence accumulates to show that it alone can rarely if ever cure the disease."

The last chapter of the book is devoted to the therapeutics of diseases of the skin and contains a very complete set of formulæ for baths, caustics, plasters, lotions, mixtures, pastes, pills, powders and ointments that should be of much assistance to physicians.

H. W. C.

Handbook of Suggestive Therapeutics, Applied Hypnotism, Psychic Science. A Manual of Practical Psychotherapy, Designed Especially for the General Practitioner of Medicine and Surgery. By HENRY S. MUNRO, M. D., Omaha, Nebraska. Third Edition, Revised and Enlarged. St. Louis: C. V. Mosby Company, 1911.

This book is intended for the use of the general practitioner in his every day work and as such it can be safely recommended. It is clear in style, sufficiently comprehensive and embodies the main principles of psychotherapeutics. The author endeavors to establish the value of this mode of treatment not only in so-called psychoneuroses but in numerous diseases that are considered purely physical, such as pneumonia, parturition, etc. At the risk of reiteration he attempts to lay bare the ratinale, the scientific basis of influencing the bodily functions through the intellectual centers and quotes extensively from the writings of Muensterberg, Prince, Sidis and others. For him psychotherapy means nothing more or less but suggestion with or without hypnotism. He devotes some space to the psycho-analytic method of Freud and the association tests of Jung, accrediting some value to the latter as a means of dislodging certain elusive emotional complexes. There is an excellent chapter on the "guidance of the sexual instinct" and the rôle it plays in the development of neurotic disorders. Religious teachings in vogue and philosophy receive their share of criticism and the bearing they have in influencing the mental mechanisms.

Had the author curbed his enthusiasm a little and avoided so much reiteration, the book, we believe would have served its purpose to better advantage.

N. A. P.

The Blues (Splanchnic Neurasthenia). Causes and Cure. By ALBERT ABRAMS, A. M., M. D. (Heilderberg), F. R. M. S. Consulting Physician, Denver National Hospital for Consumptives, the Mount Zion and the French Hospitals, San Francisco; President of the Emanuel Sisterhood Polyclinic; formerly Professor of Pathology and Director of the Medical Clinic, Cooper Medical College, San Francisco. Illustrated. Fourth Edition. Revised and Enlarged. New York: E. B. Treat and Company, 241-243 West 23rd St., 1911.

After devoting some hundred and ten pages to a conventional discussion of the etiology, symptomatology and treatment of neurasthenia, the author attempts to describe a special form of it under the caption of "Splanchnic Neurasthenia," "characterized by attacks of depression, which come on spontaneously without apparent cause and depart as mysteriously as they came. The subjects of such attacks specify their condition at the time as *as a fit of the blues.*" As to the pathology of the disease he adds, "This form of neurasthenia is dependent essentially

on a stagnation of the blood in the splanchnic or abdominal veins. The factors involved in this engorgement are "diminished intraabdominal tension, insufficient lung development and a defective vaso-motor apparatus."

The author tries to separate this class of cases from those suffering with visceroptosis and claims certain and permanent therapeutic results by 1, massage of the abdominal walls; 2, exercises which strengthen the abdominal muscles; 3, respiratory exercises; 4, electricity to the abdomen (specially the sinusoidal current); 5, abdominal supporters; 6, cold water.

There are some twenty notes added bearing upon the inter-relation of different viscera and also some remarks about spondylotherapy. The book as a whole is well written and contains some valuable suggestions. There is a growing tendency to regard neurasthenia not as a disease entity but a mere symptom-complex resulting from various morbid states. Psychasthenia is included in neurasthenia and here and there we come across with statements that need revision; such as on page 46 when intestinal auto-intoxication is mentioned as a cause of locomotor ataxia; and again on page 58 "attracted by these symptoms, they become self-introspective, misconstrue their sensations and develop *phobia* or fears." The book is handy; binding and printing are well executed.

N. A. P.

The Non-Surgical Treatment of Duodenal Ulcer. By GEORGE HERSCHELL, M. D. London, Henry J. Glaisher, 1910.

This brochure is a reprint of an article which recently appeared in the *Clinical Journal*.

Cases of duodenal ulcer in which there is marked interference to the passage of food along the duodenum, danger to life from hemorrhage or perforation, Herschell regards as demanding surgical interference; all others he considers amenable to medical measures.

He agrees with other English pathologists, that a duodenal ulcer is caused by the direct action upon the intestinal wall of trypsin and other proteolytic ferments contained in the digestive fluids, and set free from disintegrated tissue cells and leucocytes. In health the duodenal wall is protected against these ferments by the presence of anti-enzymes and anti-lysins in the blood serum. Under certain health deteriorating conditions, such as pyorrhœa alveolaris, auto-intoxication from the intestinal tract and anaemia, these anti-bodies are absent from the blood or present in diminished amount, and in consequence the duodenum becomes vulnerable to the lytic fluids with which it comes in contact. He treats duodenal ulcer along the following lines:

1. The elimination of any condition which may account for the deficiency of protecting bodies in the blood. This includes dental attention if necessary, anti-syphilitic treatment when required and intestinal disinfection when there is evidence of abnormal putrefaction. He considers the best method of accomplishing the latter is by the administration of the Bulgarian bacillus preferably given in the form of a fresh dried preparation. For the concomitant anaemia he administers the soluble citrate of iron hypodermatically.

2. An attempt to remedy the deficiency of anti-tryptic and anti-lytic substances in the blood. He uses normal serum which has the advantage of not only containing a large quantity of anti-bodies, but which when administered per orem, exerts a direct stimulating effect upon the surface of the ulcer itself; to say nothing of its power to fix any hydrochloric acid and residue of tryptic and peptic bodies remaining uncombined with the protein of the food, as it enter the duodenum from the stomach.

3. The reduction in the acidity and peptic power of the gastric juice. The activities of duodenal digestion must be lessened by limiting the amount of acid chyme ejected from the pylorus. This may be accomplished by neutralizing the contained acid by means of alkalies; fixing it, by the inclusion in the diet of substances having high combining power, or by the administration of articles of food which tend to inhibit the action of the peptic ferment. Since Magnesia Usta (calcined magnesia) combines with twice its weight of hydrochloric acid (sodium bicarbonate with only one-half) and does not disengage free carbonic acid gas, which tends to produce flatulent distension, he thinks this is the proper alkali to use. It being demonstrated that normally the peptic digestion is inhibited after a set time by products of digestion, the most important being albumose, maltose and gelatin he utilizes these substances. Albumose he uses in the form of the commercial advertised so-called peptones. Malt extract and ordinary soup stock furnished the other two factors. To inhibit the gastric secretion he orders all food stuffs presented to the patient in a finely divided condition, so as to require little or no mastication. Fats in the form of fresh butter, olive oil and pancreatized emulsion of mutton fat he regards as adjuvants.

N. K. F.

Higienic Laboratory Bulletin No. 79, January, 1912. Digest of Comments on the Pharmacopoeia of the United States of America (8th Decennial Revision) and of the National Formulary, for the calendar year ending December 31, 1909. By MURRAY GALT MOTTER and MARTIN I. WILBERT. Washington, 1912.

This bulletin of 735 pages, the fifth of the series of "Digests" published by the Public Health and Marine Hospital Service, embodies a review of literature relating to articles included in the United States on Pharmacopoeia and the National Formulary, which appeared during the calendar year ending December 31, 1909.

The compilation of the several Pharmacopoeias with the provision of the Brussels Conference has been brought down to date and the table showing the coöperative compliance evidenced by the several Pharmacopoeias published since 1905 added.

The material included is generally arranged in accordance with the nature and style of the official monographs. The comments on nomenclature requirements being given precedence over those on origin or tests for purity while references to the pharmacology and the therapeutic uses of the drug or compound are found at the conclusion of the paragraphs arranged under the several headings. In all some 240 association proceedings and Journals, medical and scientific, have been reviewed.

Like the majority of the publications of the Public Health and Marine Hospital Service, the work is of inestimable value to the Physician and Pharmacologist.

N. K. F.

Hygienic Laboratory Bulletin No. 84, May, 1912. Digest of Comments on the Pharmacopoeia of the United States of America (8th Decennial Revision) and on the Natural Formulary (Third Edition) for the calendar year ending December 31, 1910. By MURRAY GALT MOTTER and MARTIN I. WILBERT. Washington, 1912.

This bulletin, the sixth of the series, in addition to being a complete review of the literature, includes the comments immediately preceding and following the opening of the Pharmacopoeial Convention in Washington, May 10, 1910.

Like the preceding, the material is arranged in accordance with the style of the monographs abstracted. In connection with articles for which a large and varied number of comments are available, they are arranged in the following order: title, origin, composition, requirements, tests, assays, adulterations, preparations and uses. This work represents a review of the medical and pharmacological literature of eighteen countries.

N. K. F.

New and Non-Official Remedies, 1912. Containing descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to January 1, 1912. Chicago, American Medical Association, 1912.

This 300 page volume contains the medicinal substances with their official names, manners of preparation, uses, dosage and manufacturers which prior to January 1, 1912, have been examined by the Council on Pharmacy of the A. M. A. They appear to comply with the rules of the Council and are therefore accepted for inclusion in the annual "New and Non-Official Remedies."

The acceptance of the article included in the book has been based in part on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council.

In this day of the enormous multiplication of the synthetics and proprietaries, a work of this sort is of immense value and well nigh indispensable to the medical practitioner.

N. K. F.

Manual of Clinical Pathology for the General Medical Practitioner. By RICHARD WEISS, M. A., Ph. D., F. C. S. London, J. & A. Churchill, 1910.

This pamphlet of seventy pages includes the examination of urine, stomach contents, feces, blood and the serum diagnosis of syphilis, tuberculosis and typhoid fever. It is concise and fairly complete, but the fact that it recommends for use only the technical apparatus of one English firm detracts somewhat from its scientific value.

N. K. F.

SURGERY

Edited by Albert Vander Veer, M. D., and Arthur N. Elting, M. D.

The Question of Pressure Paralysis Following the Use of the Esmarch Bandage. (Zur Frage der Drucklähmungen nach Esmarch scher Blutleere.)

WILHELM WOLF. *Zentralblatt fur Chirurgie*, No. 2, January 13, 1912.

There were recently reported at the meeting of the Surgical Society of Breslau, five cases of paralysis of the arm following the use of the Esmarch bandage. In three cases, complete recovery followed. In two of these, however, only after six months of treatment. In the fourth case an operation was performed only two months previously and the paralysis was improving. In the fifth case, six months had passed and there was still considerable paralysis of motion and sensation.

The writer reports a similar case which has recently occurred in his practice. It was that of an officer, thirty years of age, upon whom he operated for tendon suture in the hand. The elastic bandage was applied to the arm for about an hour and when the patient recovered from the anaesthetic there was a complete paralysis of the left arm. Two weeks later a nerve specialist confirmed the diagnosis of ischemic paralysis of all the nerves of the left arm. At that time there was no reaction of degeneration, but two weeks later it was present. At the present time, eight weeks after the operation, the paralysis is improving but will probably require six months for complete recovery.

The writer has endeavored to investigate if possible the underlying causes of these paralyses, especially their relationship to pre-existing syphilis. In this instance the patient had had a syphilitic infection in 1902 and the writer believes there is a distinct relationship between the paralysis and the syphilis and that the latter infection caused the hypersensitivity of the nervous system to all sorts of injuries and insults.

The writer, at any rate, feels that the use of the Esmarch bandage should be, if possible, avoided in cases known to have syphilis and believes that in this way, the unpleasant complications may be avoided and that surgeons will not be compelled to take the positive position assumed by Kuttner who for years has not allowed the use of the Esmarch bandage on the upper extremities, because of the dangers of paralysis.

Bacterial Stones in the Pelvis of the Kidney with Some Consideration of the Treatment of Acute Suppurative Nephritis. (Ueber Bakteriensteine im Nierenbecken zugleich zur Behandlung der akuten, eitrigen Nephritis.)

ALFRED NEUMANN. *Deutsche Medizinische Wochenschrift*, No. 32, 37 Jahrgang.

In spite of the great advances which the X-Ray, cystoscope, catheterization of the ureters and cryoscopy have made, there are, nevertheless, conditions occurring in renal surgery in which the choice of proper therapeutic measures, is a very difficult problem.

The writer reports the case of a young woman, twenty-six years of age,

who for a number of years had intermittent attacks of pain in the right side in the general region of the kidney. After her second confinement, she was taken ill with some fever and pain in the right side. She presented the usual appearances of an acute inflammation of the right kidney, clinically, as well as from the urinary view point. She recovered temporarily from this attack but eight weeks later was again taken sick in the same manner. Radiographs were made but no shadows were seen. The right kidney was exposed, the kidney incised and several small concretions removed from the pelvis, together with a considerable amount of pus. She made an uneventful recovery. Careful examination of these concretions by Prof. Pick showed them to be composed of masses of bacilli, which proved to be the colon bacillus. Concretions composed of colon bacillus have previously been observed in three instances, all of them in women. This, of course, explains the absence of the shadows in the radiograph. This case illustrates the importance of the condition spoken of as bacteruria, this is, a condition in which in healthy people, without any evident disturbance of the kidneys, bacteria may appear in the urine and may apparently at times give rise to a disease of the kidneys.

The patient remained well for several weeks, when she was taken very seriously ill again, this time the pain and symptoms localized themselves in the region of the left kidney and the urine in addition to the colon bacillus, also contained many streptococci. The patient's condition became so serious that an operation was decided upon. The left kidney was exposed and found to be diffusely infected with miliary abscesses and was removed. The patient made an uneventful recovery.

This case led the writer to investigate the frequency of one-sided acute suppurative nephritis, occurring either in the urogenous form or in the hematogenous form. With this end in view, he investigated the autopsy records in 10,500 cases in their pathological institute and found 142 cases of suppurative nephritis without stones and without pyonephrosis. The histories in these cases showed that in 93 instances the infection was urogenous, while in 49 it was hematogenous. Of the urogenous cases 16% were unilateral and of the hematogenous cases, 4%. In 45 of the 142 cases the on-set was acute. Thirty-nine of these cases were hematogenous in origin and six were urogenous. In all of these 45 cases, infection was apparently bilateral, and in all instances, clinical symptoms pointed to both kidneys.

It is, however, evident that unilateral cases do occur, and the writer in his experience has encountered three others besides the ones referred to. A brief history of each of which is presented.

One instance in which the associated facts were all especially important, concerned a young woman 18 years of age who presented all the symptoms of a desperately severe infection of the left kidney. The kidney was exposed and a diffuse infection found. There were no symptoms pointing to the right kidney and nephrectomy was performed, with an uneventful recovery. This was evidently an urogenous case. The patient had been married several months. On examination the hymen was found to be intact and very rigid. The urethra readily admitted the finger and

it was very evident that coitus had taken place through the urethra, and this was regarded as the source of infection.

The writer emphasized the fact that whenever it was possible nephrotomy should be done and the kidney saved, but he also insists that in a certain number of instances where the infection is unilateral and diffusely affects the kidney, nephrotomy can be of little benefit and nephrectomy is the operation of choice.

Experimental and Anatomical Investigations of the So-called Myoma Heart. (Experimentelles und Anatomisches zur Frage des sogenannten Myomherzens.)

M. NEU and A. WOLFF. *Münchener Medizinische Wochenschrift*, No. 2, 59, January 9, 1912.

One of the writers some time previously published an article on this subject in which he came to the conclusion that the existence of a definite idiopathic heart lesion in women with myomata, was not proven. He believed that a disturbance of the heart in such cases not infrequently existed but that it was due to anemia or a general weakness of the entire organism. He also called attention to the association of certain vaso motor symptoms with some cases of myomata, in which instances, an associated disturbance of the thyroid glands existed.

The writers have carefully gone over the literature of the myoma heart and refer to the various investigations to determine the presence of toxines in myomata and other similar studies, which have not led to any definite conclusions. The writers have especially interested themselves in the question of the iodine metabolism in cases of myoma, to determine if possible whether there is any definite relationship between the content of iodine and the disturbance of the heart. In the ovaries of uteri with myomata the writers found either the normal or a diminished amount of iodine, never an increased amount. The uterus itself as well as the myomata never contained any iodine.

The writers carried on some experiments to determine by means of injection of iodine a little while before operation, whether or not this iodine would be stored up in the myoma. The result of these observations has shown that in some instances a considerable amount of iodine has become attached to the myoma and the ovaries demonstrating that the tumors possess the power of combining with circulating iodine and that the amount of iodine in the tumor depends directly upon the amount in the blood.

From an anatomical point of view, numerous investigations of the heart in cases of myoma have been made and various conditions alleged to have been found. One condition sometimes assumed to be characteristic, is known as myofibrosis cordis. Brown atrophy and fatty degeneration of the muscle, are other conditions which have frequently been described. Winter some time since came to the conclusion that there was no definite specific relationship between myoma and heart disease and he believed that anaemia was the principal cause of the heart difficulty.

The writers have investigated a number of cases very carefully, and the only conditions which they have been able to discover have been

brown atrophy, fatty degeneration, and fragmentation. Brown atrophy is an indication of diminished and depleted nutrition and fatty degeneration is usually the result of disturbances of nutrition. Both of these conditions are not infrequently found in association with other wasting diseases and in fact, very much more frequently than in association with myoma.

The writers have come to the conclusion that there is no such thing as a specific myoma heart but merely a heart in which fatty degeneration or brown atrophy has occurred as a result of hemorrhages or disturbances of nutrition and they suggest in place of the term myoma heart the term, anaemic or tumor heart with myoma.

*Concerning Fever in Malignant Tumors of the Kidney and Adrenal.
(Ueber Fieber bei Malignen Nieren und Nebennierengeschwulsten.)*

J. ISRAEL. *Deutsche Medizinische Wochenschrift*, No. 2, January 12, 1911.

Although fever has often been observed in cancer of the stomach, intestine and uterus it does not seem to be generally recognized that it frequently occurs in malignant tumors of the kidney and adrenal. This elevation of temperature in malignant growths of the kidney is the result of the growth itself and not of any secondary infection. It has not infrequently happened that this condition has led to erroneous diagnosis as in two instances related by the writer, in one of which the diagnosis of malaria had been made because of an intermittent fever associated with a large tumor of the left kidney, which had been regarded as an enlarged spleen and in another instance, a similar condition had led to a diagnosis of tuberculosis of the pulmonary or bronchial lymphatic glands.

The first case of the kind was observed by the writer in 1895 and up to date, he has seen eighteen such cases, twelve of which have been operated upon.

The fever in malignant tumors of the kidney and adrenal may be present at varying periods of the disease. Fever, usually in malignant neoplasms, has been regarded as one of the phenomena accompanying the final stages. In some instances in malignant tumor of the kidney the writer states that the fever is an initial symptom associated with the earliest evidence of tumor. Fever may continue through the entire duration of the disease or there may be longer or shorter periods of freedom from it. The writer distinguishes the initial, the intercurrent and final forms of fever.

Three different types of fever may be distinguished. The first is the remittent or intermittent. Such a type of fever the writer has seen last for as much as nine months until it was stopped by an operation.

The second type presents the characteristics of a recurrent fever in which febrile periods last from five to seven days.

The third type of fever is one immediately associated with hematuria. This fever may either precede the bleeding and disappear with its occurrence or may follow hematuria.

The writer presents cases and temperature charts illustrative of all these types. Cessation of fever after successful operation is very striking. In some instances the fever is of a very pronounced grade and in other cases it is relatively slight.

ALBANY MEDICAL ANNALS

Original Communications

SYPHILIS OF THE STOMACH.

Read before the Medical Society of the State of New York, April 18, 1912.

By JEROME MEYERS, M. D.,

Albany, N. Y.

Syphilis of the stomach is a rare condition, both as an autopsy finding and as a clinical entity. It is an important condition, all the possible symptoms and presentations of which should be freely known, because, in some cases, needless and fatal operations have been performed under mistaken or symptomatic diagnoses, while in other cases patients have suffered over long periods of inefficient diagnosis and treatment. Moreover, even in the cases recognized as gastric syphilis, periods of weeks or months have elapsed before the true etiological cause was fixed. Therefore, the report of a new case of syphilis of the stomach, and a comprehensive review of the known cases with a comparison of their findings, are of interest and practical value. The writer's own case is as follows:

Mr. X, aged 24, first seen May 27, 1911.

Family History.—Father died of pulmonary tuberculosis at 35.

Past History.—Typhoid when young. Four attacks of gonorrhœa, the last two and one-half years ago. Syphilis, five years ago; conscientious mercurial treatment until one year ago. Wassermann reaction said to have been negative in March, 1911. No alcoholic abuse.

General History.—Fairly marked nasopharyngeal catarrh. Slight occasional cough with scanty expectoration. No dyspnoea or headache. Slight vertigo, ascribed to "biliousness." Frequent night-sweats during the winter, persisting until five weeks ago, accompanied by chills and fever. Feels weak and exhausted; has lost twenty pounds since January 1st, and fears that he is suffering from tuberculosis. No disturbances of the special senses.

Abdominal History.—First symptoms, noted six or seven months previously, are constant with exacerbations. Tongue heavily coated every morning. No dysphagia. Has dull pain, the initial seat of which was

under the right costal margin, but then spread across the median line, to localize itself at present under the left costal border, and in the umbilical-region. This pain occurs immediately after eating, especially after heavy meals, lasts one-half hour. No hunger pain. No eructations of food, sour liquid, or gas. No pyrosis. No haematemesis. Vomiting on only one occasion. Intestinal movements fairly regular, bear no relation to the attacks of pain.

Physical Examination, May 27, 1911.—Medium height, well-developed, somewhat emaciated, moderate facial acne, teeth normal, gums receded, tongue coated, pharynx normal. Eyes react to light and accommodation. No facial or lingual paralyses. Lungs normal except for distant subdued respiratory sounds all over both posterior surfaces; no râles. The apical projection areas are fairly equal in extent. Cardiac areas not enlarged, sounds normal but distant, no murmurs. The abdomen is flat, the costal angle normal. There is well marked muscular tension in the epigastrium and under both costal margins and below for a distance of about 4 cm.: also over the probable position of the pylorus. The lower border of the stomach is two finger-breadths below the umbilicus with the patient reclining; five, when erect. There is marked succussion. No tumor palpated. The pylorus is not palpable. No great tenderness to pressure. The spleen is slightly palpable. The liver is normal in position and not palpable. Gall-bladder normal. Kidneys not palpable. The regions of the sigmoid, caecum, and appendix normal.

On the anterior aspect of the left knee is a large copper colored ulcer, the center of which contains pus. Erythrocytes 3,300,000. Differential Count. Polynuclears 65%, small lymphocytes 30%, large 1%, transitionals 3%, eosinophiles 1%. No plasmodia. Purulent material from sore on knee shows fibrin with a very few leucocytes; not stained for spirochaete pallida.

Writer expressed opinion that the stomach condition might be due to old syphilis, and advised patient to enter hospital for further investigation.

May 31st.—Ewald Test—Breakfast, one hour, removed 40 cc, well-digested, little mucus, no tissue particles. Free HCl 42°, total acidity 62°. Microscopically no blood, pus cells, infusoria, amoebae, sarcinae, yeasts or lactic acid bacilli. No chemical blood.

Faeces.—No connective tissue, muscle, fat or starch rests. Hydrobilirubin normal. No chemical blood with benzidin, phenolphthalin or guaiac. No parasites.

Urine.—Indican + Urobilinogen slight in the cold. No bile. No casts. Mucus ++. Pus fairly frequent. Patient put on ulcer diet and a mixture of papain, magnesium oxide, ext. belladonnae, and resorcin.

June 8th.—Patient reports some subjective improvement in the matter of pain, but has had fever and sweats. The pulmonary condition is unchanged. Polynuclears 79%, small lymphocytes 10, large 6, eosinophiles 5. There is now marked rigidity below the left costal margin under the rectus muscle, and more pronounced tenderness to pressure. Patient strongly advised to enter hospital.

To Illustrate Dr. Meyers' Article on "Syphilis of the Stomach."

Albany Medical Annals, October, 1912



June 10th.—Entered the Albany Hospital. Hot fomentations applied to entire abdomen every two hours. The rigidity in the left side soon lessened, so that, on the 11th, there could be palpated an irregular mass, slightly modular, fairly hard, under the left rectus, extending 4—5 cm. from the border of the ribs, painful to pressure, moving with respiration. Spleen distinctly palpable, 1.5 cm. below ribs.

The temperature taken every two hours showed June 10, 99.2 at 2 P. M., 99 at 4, 100.2 at 6, 100 at 8, 99.4 at 10, 98.6 at midnight. June 11 normal, except at 8 P. M., then 100; June 12, 99.4, 99.8, 99.4, at 12, 2, and 4 P. M.; June 13, 99.4, 99.2, at 10 and 11 A. M.

Von Pirquet reaction negative. No blood in stool. Specimens of sputum on two separate days show no tubercle bacilli. Leucocyte count June 12, 14,600; June 13, 8,000. Wassermann reaction strongly positive. Blood culture proved negative to any bacterial growth.

Patient returned home on the 13th, remaining in bed on account of temperature.

June 16th.—Fluoroscopic and radiographic examination. The former was not satisfactory, as the high position of the lesion rendered this method difficult. The appended radiographic print leaves no doubt that the seat of the trouble is in the stomach, and in the region just under the tumor mass palpated, the lesion being very probably in the form of a widespread gummatous infiltration of the walls of the stomach, the mucosa being little, if at all, invaded. It is very probable that the pylorus may be somewhat stenotic as shown in the radiographs, and as indicated in the history and physical examination. Dr. Holding, who made the radiographic plates and prints agrees with the writer, saying, "the radiograph shows a bismuth shadow of a "dipper" shape the handle of the dipper corresponding to the cardiac portion, the reservoir of the dipper to the dilated pyloric half of the stomach. The "magen-blase" is visible in its normal position, immediately below it the walls of the stomach are symmetrically contracted, so that the lumen of the stomach is represented by a bismuth line about 2.5 in diameter. This extends about 6 cm., when the walls again expand symmetrically on both curvatures. The bulk of the bismuth meal is contained in the pyloric half of the stomach which is dilated, the marker on the umbilicus showing midway between the upper and lower borders. Peristaltic waves are visible about the antrum. The rugae are distinctly visible in the contracted portion of the stomach."

Diagnosis.—The history of pain, occurring immediately after eating, the lack of haematemesis, of occult blood in the stomach contents and feces, the failure of benefit from an ulcer diet, the history and signs of syphilis, the positive Wassermann reaction, the absence of tubercle bacilli in the sputum, the results of radiographic examination, all render a clinical diagnosis of gastric syphilis justifiable and logical. The diagnosis was substantiated by the result of therapy. Under 15-drop doses of KI and daily inunctions of mercury, which gave no gastric discomfort, the patient, in a few days, lost the subjective symptoms of pain, the rigidity

markedly lessened, the tumor mass became very soft on palpation, and tenderness to pressure disappeared entirely. The patient during this time remained in bed and most carefully registered his temperature over a period of two weeks after beginning treatment. At no time did he have a rise of temperature or night sweats. He was last seen July 8, 1911, at which time he had gained ten pounds, his appetite was exceedingly good, and he had no pain on eating. A mass could still be felt under the left rectus, but softer than at first, with no rigidity or tenderness. Patient shortly afterward left for a distant State. In a letter of January 3, 1912, he states that "I am still taking ten to fifteen drops of potassium iodide a day, my stomach is not giving me a particle of trouble; no pain, no tenderness or any other indication of the old trouble."

Coming now to a study of the recorded cases of syphilis of the stomach, the writer has carefully studied and tabulated some fifty or sixty more or less completely reported instances of the condition, both congenital and acquired. The comparative etiology, pathology, symptoms, prognosis, and treatment of the cases will give data of interest and practical value.

First, then, as to etiology. Taking into consideration the cases of acquired syphilis only, we find that, of forty-nine cases, thirty-one are in males; that the youngest case is at the early age of eighteen, the oldest at sixty; that the earliest incidence after the primary infection was ten months, occurring, it may be noted, in the youngest case, the latest incidence after infection was twenty-five years in a man of forty-eight. Four cases showed gastric symptoms as early as two years after the initial infection, two after four years, two after five, and then the periods range through six, seven, ten, fifteen, sixteen, twenty, and twenty-five years. From the data at hand, one case occurred between the ages of ten and twenty, four between twenty and thirty, fifteen between thirty and forty, ten between forty and fifty, seven between fifty and sixty; so that the greatest frequency by far lies between thirty and forty, and forty and fifty, inclining one to the conclusion that the great majority, if not all the authentic cases of gastric syphilis, are of the tertiary period, and, that while it is possible that syphilis of the stomach may be more frequent than medical records show, or that secondary syphilis may often give independent gastric lesions, it is, however, very probable, from a close study of all the cases of gastric syphilis with the statistics above given, that gastric syphilis is a tertiary manifestation, and other cases are to be explained by the general

metabolic and haematogenic disturbances coincident with a general infection such as syphilis is.

Reviewing the pathology of the cases some interesting conditions can be adduced. Firstly we find, markedly in the congenital cases, a multiplicity of lesions, that is, the gastric lesion is only a concomitant, or local manifestation of a general condition, evidenced by synchronous gummata in the liver, small intestines, bones, or lungs. This plurality of lesion is not so evident in the acquired cases, but it may exist as in cases five, nine, thirteen, fourteen and twenty-seven, or there may be a very well-grounded suspicion in purely clinical cases as in case fifty-five and the writer's, in both of which there were pulmonary findings. Secondly, any region of the stomach can be involved, so that no conclusions regarding any relationship between the site of the lesion and its character can be drawn. Thirdly, we find multiple lesions in the stomach, not only in the congenital cases, but in the acquired as well, three to five to thirteen lesions being found at autopsy, while the clinical often present symptoms and physical findings of plural lesions. Fourthly, we find a variety of lesions, from the gumma to ulcer and peritonitis, the lesion usually originating in the submucosa, often involving the muscularis and serosa, or invading the mucosa with consequent ulceration. The gumma can be situated in any region of the organ, can vary from microscopic size to that of a pea or even the palm of a hand, may be strictly localized, or widespread in the submucosa, growing around a large arc of the circumference of the region invaded. At or near the pylorus, it gives rise to typical physical findings and subjective symptoms of stenosis due to neoplasm. It may ulcerate, forming a deep ulcer, and lead even to perforation. At other times the gumma may infiltrate diffusely, large areas being thickened, as in case thirty-eight, the microscope showing characteristic cellular gummatous proliferation from the submucosa. Again, the proliferation may be very dense and especially fibrous, particularly about the pylorus, attacking even the serosa and other peritoneal parts of the abdomen, as in cases thirty-eight, fifty-one, fifty-two and fifty-three, so that pyloris stenosis results, or large parts of the stomach are involved and shrunken, giving rise to such diagnoses as linitis, chronic hypertrophic gastritis, hypertrophic stenosizing submucous sclerosis, pyloric sclerosis. This variety probably represents

advanced stages of syphilitic involvement that has attacked large areas in the gastric walls or extended to the peritoneum, the lesions in both places characterized by the predominance of dense connective tissue. Ulcer may be primary or secondary, probably more often in the latter category, due to degeneration of gum-mata. Haemorrhage occurs, due to erosion of blood vessels in necrotic gummata, primary ulcer, or as a result of endarteritic processes. Finally through massive infiltration or adhesions we may get hour-glass contraction as in case forty-one. The pathology of syphilis of the stomach presents the protean character found in other systems of the body; it presents all the possible conditions of gastric disease, so that we might justly say, if we could recognize all the various forms and consequent symptoms of syphilis of the stomach, we should be able to diagnose nearly all the organic gastric diseases.

Considering now the symptoms and diagnosis as shown by the recorded cases, it can be seen that the former have often little that is absolutely characteristic, while the latter is sometimes the result of successful conjecture, other times the result of elimination through time and unavailing treatment for ulcer, cancer, or what not. The diagnosis has been made at autopsy, at operation, and on a priori grounds of antecedent syphilis with suspicious gastric symptoms. Very often the true diagnosis has been delayed weeks and months, and this is natural, because of the rarity of the disease and its lack of individual symptoms. It would seem, however, with so many cases of general syphilis, that the condition should be of more common occurrence, and it is very possible that, if the more intractable cases of apparently simple ulcer or protracted cases of gastric tumor with more or less anomalous symptoms and findings were more closely studied, the condition might be more frequently encountered and cured. But whatever the probabilities, the reality is that the diagnosis must remain very much a matter of personal acumen. There are, however, some indices that should warrant the diagnosis. Firstly, of course, is the establishment of precedent syphilis in the history of the patient, or by the Wassermann reaction. The matter of history should include any condition of the special organs as the nose, throat, eye, or skin, for, as seen from the recorded cases, the finding of scars, with a confession or sudden recollection of

necrosis or ulcer, have enabled a proper diagnosis with cure, or even the saving of life. Not only the patient, but the wife or husband should be thoroughly questioned and examined. Secondly, and of great importance, is the failure of cure or relief by classical diet or drugs. Thirdly, is a group of symptoms, met singly or combined, in so many of the clinical cases, that considerable diagnostic importance must be ascribed to them. These symptoms are pain, tenderness, emaciation, and haemorrhage, symptoms found not only in the cases of ulcer, but in gumma, and the infiltrating, stenosing forms of the disease, a fact which would seem to show that the symptoms are in the main dependent on the syphilitic factor rather than the form of the lesion, or else, what is very probable, we may have similar symptoms in many cases due to the tendency to multiplicity and variety of lesions as emphasized under the pathology. Not uncommonly is more than one region of the stomach affected by the same or different form of lesion. At any rate, pain is of frequent occurrence, presenting as a cardinal symptom in sixty-seven per cent of the recorded cases. It seems especially prone to occur immediately after eating, a condition explainable by the pressure of food on walls rendered less elastic by gummatous change, or by spasm due to irritation. Nocturnal pain is found in some of the cases and especially mentioned by some of the authors, but this fact must be considered, that in non-specific cases, nocturnal pain is often met with. Tenderness to pressure is often very marked, probably more so than in early carcinoma, the result of the extension of gummatous processes from the submucosa to the serosa. Haemorrhage, found in thirty per cent, is often so profuse as to be fatal, and may be the first symptom. Blood in the stomach does not necessarily occur as the mucosa may be intact, as in case fifty-one and the writer's. There may be bloody mucus as in case twenty-eight, associated with anacidity, raising the question whether some of the reported cases of so-called achlorhydria haemorrhagica gastrica⁵⁹ are not basically luetic. Emaciation is a marked symptom, the patients losing flesh rapidly, whether the condition be clinically that of ulcer, tumor, or stenosis; in forty-seven per cent loss of weight is so prominent as to be almost the predominating complaint. Vomiting occurs, but is more or less dependent on the site and results of the lesion, rather than its syphilitic nature. Physical exami-

ination gives the same findings as in other organic gastric conditions of tumor, ulcer, stenosis, etc.; especial attention should be directed of course to the palpation of multiple lesions in different areas of the stomach, and the extreme tenderness with its associated rigidity. The test-breakfast here gives no more definite diagnostic data as to the exact nature of the lesion than it does in any other condition. It must be interpreted with other findings. The gastric juice has been found normal, hyperacid, or anacid, the motility of course depends on the site and character of the lesion, the microscopical characteristics vary with the acidity, the motility, and the integrity of the mucosa. The matter of rise of temperature is not extensively mentioned in the series of cases, but it should be an important factor, firstly, because a pulmonary involvement may give very active variations of temperature with chills and sweats in every way simulating tuberculosis; secondly, because visceral syphilis *per se* can cause fever.⁶⁰ Naturally, any râles or abnormalities of respiration as in cases nineteen, fifty-five and the writer's are of great moment.

It would seem best, after an examination of the pathology and symptoms as reported, not to attempt too strict a classification of the clinical cases, but to say that we have cases of gastric syphilis that present symptoms (1) of ulcer in various parts of the stomach and its results, (2) of gumma in various parts and its result as a tumor, (3) of widespread infiltrations of a gummatous or more fibrous character leading to deformity, cicatrization, or involvement of the peritoneum or neighboring organs, (4) of combinations of these lesions, causing a variety of symptoms and involved findings on physical examination.

The prognosis is extremely good, provided the patient is not too debilitated by the mechanical effects of a tumor, or if there are not dense adhesions and peritonitis. The latter cases are not very favorable as to recovery unless recognized early and treated surgically. It is probable that mercury or the iodides are of little or no benefit here. In the other cases, even of advanced tumor or profuse haemorrhage, the use of mercury in any form and of the iodides gives brilliant results, oft times in a few days, and, in all but a few cases, has led to complete relief of the symptoms. If the tissues of the stomach are completely repaired is another question; it is doubtful; case fifty-seven is very inter-

esting in this connection, for with relief of symptoms of pain, emaciation, and retention, the gastric juice, which had been anacid, showed no change after nine months treatment with KI. The use of 606 is, of course, indicated with the same precautions as in other syphilitic disorders.

From our consideration of the various phases of the cases of syphilis of the stomach we may draw the following conclusions:

(1) It is a rare manifestation of syphilis, congenital or acquired, occurring mostly in males, especially in the fourth and fifth decades, but also at almost any age.

(2) Its pathology is characterized by (1) multiplicity of lesions in many organs, (2) by variety and plurality of lesions in the stomach itself.

(3) Its symptomatology corresponds to the pathological findings; it presents no unanimity of symptoms.

(4) There are four symptoms which are, however, fairly common, singly or combined. These are (1) pain, especially immediately after eating, (2) emaciation, (3) tenderness, (4) haemorrhage.

(5) Clinically, we should not divide cases of gastric syphilis too strictly, as an exact diagnosis of the form of lesion is often impossible, except by operation or autopsy.

(6) We may classify syphilis of the stomach under (1) ulcer in any part of the stomach and its results, (2) gumma in any part and its sequelae as a tumor, (3) widespread infiltrations of gummatous or more fibrous character leading to deformity, cicatrization, or involvement of the peritoneum or neighboring organs, (4) a combination of two or more of these.

(7) The diagnosis is extremely difficult as a rule. If there be a clear history of syphilis, or if the Wassermann is positive, the diagnosis should be comparatively simple.

(8) The proper diagnosis is extremely important, as exitus may occur through haemorrhage, inanition, or stenosis, when timely intervention could have cured. Even when properly diagnosed, many of the cases have suffered delays through false diagnosis and treatment.

(9) Any form of mercury or the iodides give as brilliant results as are to be found in the practice of medicine.

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CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Klebs ¹	M., acq. syphilis		(a) Skin scars, fresh ulcerations, gumma of lungs, liver and intestines. Gumma posterior cardia. Muc. memb. thick, sieve like with ulcer base. Granulation tissue from submucosa.	Gumma. Gummata of lungs, liver and intestines.	
Cornil ² and Ranvier	F., 39, acq. syphilis		(a) Gumma of liver. Small gummata of lesser curvature near pylorus. Thickening of wall in form of flat tumors. Granulation of embryonal cells of submucosa extending to muscularis and serosa	Multiple gummata of liver.	
Weichsel- baum ³	M., 25, acq. syphilis	Erysipelas	(a) Signs of general syph. in pharynx, larynx, nose, cranium and liver. Two gummata of post. wall between fundus and pars pylorica showing ulcers with scar basis.	Multiple gummata of liver, cranium and General syphilis.	

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Birch ⁴ - Hirsch- feld	M., 35, acq. syphilis 4 years before.		(a) Gummata from esophagus to stomach showing ulcer with smooth partly caceous base and fibrous thickened edges. Scars in liver. Gummatoous plaques in small intestine. Gummatoous infiltration of bronchial and lower mediastinal glands.	Gummatoous neoplasm. Gummata of small intestine and lymph glands.	
Ditto ⁵	F., 45, acq. syphilis 6 years before.		(a) Gummata pars pylorica ulcerated as superficial large gummata. Ulcerated plaque with thick nodular edges. Proliferated submucosa nodular cicatrizing. Obliterated vessels. Gummata of liver.	Gummata of liver.	
Ditto ⁶	New - born, congenital syphilis.		(a) Gummata of pars pylorica, projecting, white Gummata of thickness, size of palm. Granulation tissue in mucosa, submucosa and muscularis. Thickened vessels. Gummata of lungs and liver.		

Ditto ⁷	M., 3, congenital syphilis	(a) Gummata of cardia in form of ulcer, hard neoplasm. Gummata edges. Gummata in glands and small int.
Chiari ⁸	M., 3 weeks, congenital syphilis.	No gastric disturbances. Icterus.
Ditto ⁹	M., 23, acq. syphilis years before-death.	(a) 5 gummata, larger curvature and fundus, circumscribed, raised, partly superficially ulcerated plaques. Gummatus perivascular infiltration from submucosa. White pneumonia. Osteochondritis. Gummata of small int. and liver.
Bittner ¹⁰	M., 2½ hours, congenital syphilis.	(a) 4 thickened plaques, one ulceration perforating, size of palm. On post. and ant. walls. Gums. of lungs, liver, kidneys, intest. Edges of gastric lesions show proliferation of submucosa.
		(a) 7 gums., of ant. wall, pea-size, hard, white plaques of granulation tissue from submucosa, attacking mucosa, muscularis, and at times perosa. Pneumonia alba. Osteochondritis. Gums. in liver and int.

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Ditto ¹¹	Macerated fetus. genital syphilis.	.....	(a) One small, pea-size, white, hard infiltration with upturned edges superficially ulcerated. Gummata of lungs, liver, small intestine. Osteochondritis. Penphigus syph. Granulation from submucosa especially about vessels.	Gumma. Gummata of lungs, liver and small intestine.	
Ditto ¹²	Female.....	.....	(a) Occ. thickening of walls. Gummata in lungs, liver, small intestine and kidneys. Adrenals diseased. Gummatus thickening of submucosa and mucosa.	Gummata of liver, lungs, small intestine and kidneys.	
Buday ¹³	M., 47, acq. syphilis. Pain, blood in stool, course very similar to carcinoma.	.....	(a) 3 gummata, 2 large curvature, 1 near pylorus; wall thick, and neoplasms show deep necrosis. Proliferation of submucosa. Partial atrophy of muscularis. Gummata of mesentary, kidneys, liver, small int. and tongue. Splenic tumor.	Ulcerated gummata.	

Fraenkel ¹⁴	M., 47, acq. syphilis. Pain in epigastrium, especially at night. No free Hct in the stomach. Perforation and death from ulcer of small intestine.	(a) 13 ulcers in the stomach. The mucous infiltration with ulcer formation. 31 Multiple ulcers in small intestine.	Gummatus infiltration with ulcer formation.	Biniocidie Hg.
Obern-dorfer ⁵	M., 4 months, congenital syphilis. Pain and diarrhoea.	(a) 6 gummata of post wall which is thickened and shows superficial ulceration. Gummata particularly in mucosa arising from submucosa. Gummata of liver, small int. and adrenals. Spleen tumor.	Gummata of liver, small intestine and adrenals.	Gummata of liver, small intestine and adrenals.
Dieulafoy ¹⁵	M., 18, first symps. 10 months after infection. Pain in epigastrium worse after eating. Frequent vomiting. Profuse hemorrhage. Emaciation.	Tenderness at tip of xyphoid. No dilatation.	Ulcerating gummata	Biniocidie Hg.
Ditto ¹⁷	M., history of suppurating glands of the neck. Sudden profuse hemorrhage without apparent reason, followed by several more next day.		Hemorrhage . . . Recovery on Hg.	

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Andral ¹⁸	F., pain and vomiting not relieved by treatment. Ulcer on post. wall of pharynx.	Syphilitic periostitis. Cutaneous pustules.	.....	.....	Hg. i.2 injections. Complete recovery.
Ditto ¹⁹	M., symptoms of phthisis and gastritis, frequent cough, hoarseness, dyspnoea, anorexia, pain in epigastrium, frequent vomiting, peristaltic pains. Fournier ²⁰ F., infected 10 years before. First attack moribund, profuse haematemesis, persistent vomiting of blood for 3 or 4 months. Second attack 6 years later. Marked emaciation. Hemorrhages.	.....	.....	.....	1. Recovery on KI rapid. 2. Recovery on KI.
Ditto ²¹	M., suffered from severe syph. Haematemesis. Desisted in treatment with KI; rupia and haematemesis, yielding again to KI.	.....	.....	.....	KI with recovery.
Murchison ²²	M., syphilis 5 years previously. Nausea, profuse haematemesis, melaena, death.	.....	.....	.....	(a) Cirrhotic and nodular liver. Ulcer of stomach in center of which is an open artery.

Dubutte ²³	M., infection 10 years previously. Emaciation, digestion poor; dull pain in epigastrium.	Indurated projection size of pigeon's egg in epigastric region lying in wall of stomach.	Gumma of wall Hg, and KI. Recovery.
Wagner ²⁴	M., 58.....	(a) 3 elevated and infiltrated foci, largest posteriorly and at pyloric. No microscopic examination.	Hg. by injection. Cure in 2 weeks.
Henne- ter ²⁵	F., II, congenital. Incessant vomiting and gas-tralgia.	Huge gumma of lower jaw.	Gastritis.....
Ditto ²⁶	Child. Congenital. Gas-tralgia, nausea, emacia-tion, vomiting.	.....	Gastritis.....
Flexner ²⁷	M., 52, ill for 3 years, vomiting, chills following acute alcoholism.	Tumor in splenic region nearly to umbilicus. Very tender. Ascites. Tapped every 6 to 14 days, ² to 6 gallons removed.	(a) Syphilitic ulcer. Old adhesions between liver, stomach, spleen and pancreas. Large gumma of liver. Ulcer in stomach shows perforation, base mostly muscularis, edge thick, polyoid, firm. Perforation ¹⁵ by 3 mm. Micros: Chiefly in sub-mucosa extending into muscularis and less into mucosa.

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Einhorn ²⁸	F., 35, infection 2 years previously. Gastric symptoms for 6 mos. Pain soon after meals. Occasional vomiting. Appetite impaired. Weak. Loss of 20 pounds.	Goose-egg tumor, nodular, hard, under left border of the ribs, with respiration. Gastric region painful to pressure. Test breakfast: F. Hcl O. T.A. 4. Lactic acid O. Rennin O. Considerable mucous, mixed with blood.	.....	Syphilitic tumor.	Hg. and KI. Complete cure in several weeks.
Ditto ²⁹	M., 50, chancre 20 years ago. Anorexia and insomnia for 18 years. Pain in abdomen for last 3 years. Pain subsided but returned a year later. Persists now 6 months, during which period there has been a loss of 15 lbs. Gained 15 lbs. on KI. Well for about a year then recurrence with rigidity and vomiting (pyloric). No further history.	Slight oval resistance over an area, size of a hen's egg, in epigastrium. Stomach empty, fasting. Test breakfast: Free Hcl positive. T.A. 50.	.....	Syphilitic tumor.	KI. Temporary recovery.

Ditto ³⁰	F., 30, infected 2 years before. Symptoms for 3 months; sharp pain immediately after eating; occasional vomiting, no blood. No result from ulcer treatment. No symptoms when stomach is empty. Nocturnal pain in the tibiae.	KI. Pain less in 14 days. Cure in 6 weeks.
Ditto ³¹	F., 33, infected 7 years before. Pain right after eating. Hemorrhage (q.t.). No cure with ulcer treatment. Pain and another hemorrhage.	Syphilitic ulcer.
Ditto ³²	M., 37, syphilis in 1890. In 1894 severe gastric symptoms. Pain some time after eating. Occ. vomiting. Continued to 1897. Lately worse, vomiting more obstinate. Loss of 30 lbs.	Syphilitic ulcer.
Ditto ³³	M., 38, syphilis 18 years before. Well until 3 years ago. Then pain in epigastrum late after eating. Nausea, and occ. vomiting. Lost 30 lbs. with symptoms of stenosis.	Liver enlarged hands-breadth below border, smooth. Greater curvature above umbilicus. F.Hel+T.A. So. Stomach never empty, even on liquid diet.
		Nal. Pain gone in a few days. Recovery.
		Nal. Tumor smaller in 14 days, vomiting and retention less. 20 lbs. gain in 4 months.
		Nal. Distinct improvement of pain and retention in 5 weeks. Total recovery.

SYPHILIS OF THE STOMACH

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Ditto ³¹	M., 42, Syphilis 12 years before. Gastric symptoms for 7 years. Frequent pain, appetite poor. Loss of 8 lbs.	A diffuse resistance 5 by 2 cm. with a nodular surface 2 fingerbreadth's under ensiform. Lower border stomach 1 fingerbreadth under umbilicus. Test breakfast: F HCl + T.A. 40. No retention.	.....	Syphilitic tumor.	Hg. and NaI. Recovery in 6 weeks.
Hayem ³²	M., 33, syphilitic orchitis. Sudden profuse gastric hemorrhage.	.....	.....	Syphilitic ulcer.	Lavage, large doses KI. Man now 70 years old. No further symptoms.
Ditto ³³	M., 33, lues 10 years before. Gastric symptoms, patient pale, emaciated, moderate dilatation, some resistance in neighborhood of gall bladder. Later on treatment a mass in epigastrium.	Test breakfast: F.HCl, 0.019, T.A. 0.140.	.....	Syphilitic stenosis.	Hg. and KI. Cure.

Ditto ³⁷	M., 43, no symptoms of syphilis. Constant epigastric pain. Vomiting after eating, no blood. Emaciated, pale almost cachetic. Resistance in gall-bladder region.	(b) Death. A limitis from limitis. Syphilitic infiltration.
Ditto ³⁸	M., 60, epigastric pain, frequent eructations in 1902. In 1903 appetite good, but loss of 17 lbs. Then vomiting and loss of appetite. No blood. Loss of 25 lbs. Distaste for meat. No tumor. No dilatation.	(b) Fibrous infiltration. Syphilitic infiltration. Large thickening in duodenal and pyloric regions. Microscopic gunnata. Muscular layer infiltrated, spreading to submucosa, forming a marked thickening with the mucosa irregular, villosus and in places destroyed.
Ditto ³⁹	M., 48, chancre 25 years previously. No treatment. Pains in epigastrium, pyrosis, vomiting, some emaciation, no blood, no great pallor. Stomach greatly dilated, symptoms of marked retention, sarcinae. Progressive impairment with great pain and frequent emesis.	Test breakfast: F.Hcl, o.T.A. o.284. No lactic acid. No free Hcl, fasting. Test breakfast: F.Hcl, o.075; T.A. o.216. Myosis. No knee reflexes.

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Rosanow ¹⁰	M., no signs of lues. Symptoms of ulcer for 8 years. Cardalgia. Pains in legs. Ulcer treatment for 2 months with no result.	No HCl., no organic acids, no pepsin. Dilated and atrophic stomach. Undigested food and small flakes of mucus, occasionally flecked with minute bloody points.		Syphilitic ulcer.	Inunctions and KI. Cure in 47 days.
Lafleur ¹¹	M., 39, treated for syphilis. Indigestion, diarrhoea, flatulence, fullness, gnawing at all times, worse after food. No definite pain, appetite good. Occasional vomiting. Meat best borne. Loss of 30 lbs. Usual treatment, with no result.		(b) Thick band of adhesions between ant. wall and ant. abdominal wall. Stomach adherent above, below and behind. Pylorus free. Stomach incised; shows denudation of mucosa two and one-half inches from pylorus, entire circumference denuded. Also in ant. part of the stomach for four inches towards the cardia.		

Lenzman ²	Venereal history admit-T test breakfast: F.Hci 70. T.A., 100.	Pain almost always on eating. Frequent hemorrhages. Pain on pressure. Marked emaciation. Diagnosis of ulcer. No result of treatment. Finally gastroenterostomy. No effect. Finally scar suspicious of syphilis found in pharynx.	F., 32, infected when 17. Paresis of left levator. For last one and one-half years pain after eating, hyperacidity. Pain in epigastrium. Treatment for ulcer with no effect.	Ulcerated gumma or ulcer.	KI, and Hg' inunctions.
Ditt ³				Gummatous infiltration.	Slow recovery.
Luxem ⁴ burg and Zawadzki		Frequent hemorrhages. Death.	(a) Large indurated ulcer.	Syphilitic ulcer.	
Hoover ⁵	F., 40, syphilis 16 years before. Severe pain one-half hour after eating.	Hci. present in the stomach contents.			KI. Relief. Symptoms return on stopping. Further use and relief.

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Ditto ⁴⁶	M., 50, syphilis probably 20 years previous. Wife died of condition diagnosed as cancer. All ingested food vomited for last 6 weeks. Constant epigastric pain. Emaciation. Very anemic. No tenderness.	No evidence of retention; no dilatation.	.....	.....	KI., improvement in 6 weeks.
Ditto ⁴⁷	M., 48, syphilis 20 years before. Epigastric pain, constant nausea, frequent vomiting of food and green liquid for 2 months. Marked emaciation and weakness. No tenderness or tumor.	Greatly dilated stomach. Peristalsis visible. No HCl. in green liquid.	.....	Pyloric stenosis.	KI. Restored to health in 3 months.
Kirsch ⁴⁸	M., 48, history of hypertension, died of symptoms of arterio-sclerosis and aortic insufficiency. Few days before death repeated vomiting of small quantities of blood. Diagnosis was hemorrhagic erosions possibly from atheroma of gastric arteries.	.....	.....	(a) Multiple gummata along lesser curvature. No erosions, 2 ulcers, one necrotic. A third near cardia. Mucosa infiltrated, nodular from beneath. Leukoplactic appearance in oesophagus near cardia. Small cell infiltration in submucosa extending to muscularis. No spirochaete pallida with Levaditi method.	Multiple gummata

		[KI. and Hg., with improvement.]
Muller ⁴⁹	M., 39, history of gonorrhoea and lues.	Sclerosing gastritis. Gummata or infiltration.
Jullien ⁵⁰	M., 32, pain in hepato-pyloric region. Lues 10 years previously.	Gastric dilatation, hypochlorhydria.
Gross ⁵¹	F., 52, no symptoms of lues. 14 years before suffered from ulcer of the stomach presumably; was treated and cured. One copious hemorrhage. Pain in pelvis. Loss of appetite, emaciation. Then severe pains in epigastrium.	(b) Shows fibrous sclerotic peritonitis. Liver, stomach and intestine show white, radiating plaques. Pylorus, gall-bladder, duodenum and transverse colon adherent. Fibrous tissue of pylorus especially in submucosa, in the middle of pylorus, 1 cm. thick on cross section. No tuberculosis. No neoplasm. Absolute integrity of mucosa.
Ditto ⁵²	M., lues, tuberculosis, HCl. present....	(a) Fibrous structure 6 by 8 cm. long in pars praepylorica, one-half cm. thick; another at entrance to appendix, the wall thickened 10 times at this point. Another 4 cm. long at flexure ilealis. Tissue shows richly cellular formation. Parietal and visceral peritoneum beset with whitish infiltrations showing radiations.

CASE	HISTORY OF PATIENT	PHYSICAL FINDINGS	(a) AUTOPSY, (b) OPERATION	GASTRIC DIAGNOSIS	TREATMENT
Henne- ter ³³ and Stokes	M., 24, lues 2 years before. Alcoholic, treated by inunctions. Dyspepsia for one or more years. Vomiting. At first liquids retained, but later not.	Test breakfast: F Hcl., o. Combined Hcl, o. No ferments.	(b) A small, thick stomach with a hard tumor on greater curvature near pylorus.	Chronic hypertrophic gastritis.	KI, and Hg. Quick recovery. Loss of pain; gain of 10 lbs. Appetite good in less than a month.
Morgan ³⁴	M., lues, gastric symptoms for 4 years, worse in past few months, steady pain in epigastrium, not influenced by eating or drinking, worse at night, as if was an orange in epigastrium. Distaste for animal food. Lost 35 lbs. in 18 mos. Weak, anemic.	Epigastrium sensitive, no local tenderness, no palpable tumor. Splashing $\frac{1}{4}$ in. under umbilicus. No free or comb. Hcl. No ferment, no blood. Much mucous, slight retention. Diagnosis of carcinoma. More emaciation. Tumor in pyloric region. Final confession of lues.	Syphilitic tumor. (Pyloric.)	Gummatous infiltration.	KI, improvement in 3 days, sub. and obj. Less tender. Rales gone. Tumor finally gone, but resistance remains.
Rudnitzki ³⁵	M., 54, small ulcer in youth. Gastric distress for 4 years. Worse for last 3. Greatly emaciated. Epigastrium very tender. Loss of 15 lbs. in 2 months. Fine rales in upper right lobe.	Tumor mass from left hypogastrium to 8th-9th rib on right side. Liver 2 cm. below ribs in mammary line.			

Ditto ⁵⁶	M., 47, symptoms of lues 18 or 10 years ago. Pain immediately after eating; last 2 to 3 hrs. No blood.	Area under xyphoid very tender. Liver not palpable. Reflexes increased. Paraesthesiae. Pupils wide, react poorly to light. No stomach contents.	Hg. and KI. Sarsaparilla. Slow recovery. Injections of KI. badly borne. Slight residual pain.
Meyer ⁵⁷	M., 32, pain after eating for 2 hours. Loss of weight. No melena. Ulcer treatment with further loss of 30 lbs.	Lower border 2 fingers under umbilicus; pain on pressure deep in middle line of epigastrium. No tubercle bacilli in sputum. No Hel. No blood. No lactic acid bacilli and no sarcinae in stomach contents. Diagnosis: Chronic ulcer (Car. degenerat?). In 3 mos, a palpable mass in epigastrium and retention.	Trace of lactic acid. Gas-Syphilitic tumor. Afterward discovery of ancient lues.
Sieghelm ⁵⁸	M., 39, lues 18 years before. Many cures. Copious vomiting, progressive emaciation.	Stomach contents: No Hcl; retention. Blood in stool. Slight visible peristalsis in pyloric region. Fasting stomach contains 250 cc., no Hcl, lactic acid positive. Fluoroscopy shows pyloric stenosis. Wassermann strongly positive.	Pyloric stenosis.
Writter's case. ⁵⁹			KI. Little retention. Hcl. Lactic acid.

SURGERY OF THE STOMACH.

*Read before the Medical Society of the County of Albany,
March 17, 1912.*

BY C. W. LOUIS HACKER, M. D.

The scientific study of diseases of the stomach has followed the progress of abdominal surgery for the reason that the latter has enabled us to study by direct inspection the pathology as it exists in the living. It has also enabled us to study other abdominal organs diseases of which are not infrequently accompanied by gastric phenomena. The stomach is rarely the seat of primary disease and unless we are familiar with the etiology of these phenomena many of our patients will become the victims of unnecessary gastric surgery.

Many of the failures of gastric surgery are the result of delay in diagnosis and postponement of treatment until some serious complication develops. Unfortunately a practical gastroscope is still to be invented and radiography is only of value when obstruction or deformity is present. Analysis of the stomach contents merely offers suggestions which may be of value after all physical signs and symptoms have been considered. Physical signs are of little value in the early diagnosis of gastric lesions and only when they are located in that part of the stomach which is palpable. The greatest aid in the diagnosis of gastric lesions is a careful clinical history.

Surgery of the stomach is such an extensive subject that the time which I am allowed will not permit me to discuss it in detail, I, will therefore limit my remarks to the general consideration of gastric ulcer and its complications.

Ulcer is the most frequent disease of the stomach which requires surgical treatment. Occasionally cases are cured by means of medicine and careful diet but the majority of so-called cures are merely temporary relief from symptoms. During these periods of freedom from distress the process continues and the possibility of complications is never absent. Medical treatment should be tried in every case but if there is no improvement, a surgeon should be consulted before the patient becomes moribund.

Ulcers of the stomach are usually situated in the pyloric region but symptoms of pyloric obstruction are not always due to their presence. The pylorus is not only a sphincter but also a

safety valve which nature usually closes when there is inflammation at any point between the stomach and ilio-caecal valve in order that the diseased part may be kept at rest. This may explain why many cases of so-called gastric ulcer are free from symptoms after the removal of the appendix or gall-stones.

The most rational method of treating ulcer of the stomach is by excision for the reason that it not only removes the disease but also the possibility of complications. Simple excision is practically limited to simple ulcers which are not in the region of the pylorus. Unless a gastro-jejunostomy is also performed, excision of pyloric ulcers is usually followed by recurrence. Every ulcer in which malignancy is suspected should be inspected through an opening in the stomach and when possible, should be excised. Wilson and MacCarty were able to demonstrate histologically that 71% of the gastric carcinomata removed at the Mayo Clinic were secondary to ulcer. Rodman has suggested that the entire pyloric region be resected when ulcer is present for the reason that carcinoma in this part of the stomach is so frequently secondary to ulcer. When excision is impossible or pyloric stenosis is present, gastro-jejunostomy is a very useful operation.

Gastro-jejunostomy cures many ulcers in the pyloric region for the reason that the food passes through a new channel and the ulcerated area is kept at rest. This operation when first introduced was severely and probably justly condemned but as a result of the work of the Mayos, Moynihan and others it is now recognized as a scientific procedure. These men have corrected many of the errors in technique and by careful clinical observation have differentiated the symptoms of peptic ulcer, cholecystitis and appendicitis.

With the present perfection of technique, the mortality following gastro-jejunostomy is less than that of the average laparotomy and is usually due to complications. Post-operative hemorrhage which at one time was a very frequent complication has been practically eliminated by the closer application of stitches, the use of chromic catgut and unabsorbable suture material and the double ligation of the larger vessels. In those cases where a second operation had become necessary for the control of hemorrhage, it was usually found coming from the posterior wall of the anastomosis for which reason some sur-

geons employ a third or muco-mucous stitch posteriorly. Occasionally post operative hemorrhage comes from the original ulcer.

Vomiting of bile or the so-called "vicious circle" usually occurs where the pyloris is still patent and is due to the accumulation of food and secretions in the intestines above the anastomosis. This complication rarely occurs after the Mayo-Moynihan posterior gastro-jejunostomy for the reason that there is no proximal loop and the longitudinal opening in the jejunum permits a larger anastomosis so that the food can pass directly through it.

The most serious complication after gastro-jejunostomy is the jejunal ulcer. The true jejunal ulcer usually occurs opposite the anastomosis and is probably due to disturbance of the circulation which predisposes the jejunum to the digestive action of the gastric juice. The pseudo or gastro-jejunal ulcer occurs at the junction of the stomach and jejunum and is due to errors in surgical technique. These ulcers may be acute or chronic appearing any time after a gastro-jejunostomy and the symptoms which they produce may be mistaken for those of gastric ulcer.

Occasionally patients suffering from a pyloric ulcer are only temporarily relieved by a gastro-jejunostomy for the reason that the anastomosis was not large enough. The anastomosis should never be less than six cm. long especially if the pylorus is still patent. When performing the posterior gastro-jejunostomy the transverse mesocolon should be attached to the stomach so as to avoid constriction. Occasionally this operation has failed because the anastomosis was not at the lowest point in the greater curvature of the stomach.

The most frequent complications of gastric ulcer which require surgical intervention are hemorrhage, perforation and malignant transformation.

Hemorrhage is a symptom which always alarms the patient and is often the only one that will convince that he is suffering from a surgical disease. It is rarely fatal but always suggests danger of perforation or malignancy. Hematomesis is associated with many conditions other than ulcer for which reason one should be very careful when diagnosing the primary disease. Hemorrhage from an old ulcer is more serious than from a more recent one for the reason that the chronic inflammatory changes in

the surrounding tissues interfere with the closure of the capillaries and the formation of clots.

Hemorrhage coming from an ulcer when possible should be controlled by starvation without stimulation until such a time when a more radical operation can be performed without danger to the patient.

Perforation may be acute or chronic. The latter rarely demands immediate surgical intervention for the reason that nature closes it by adhesions to the surrounding organs. It is usually recognized during an operation for the relief of the primary condition or the drainage of an abscess which may have formed. When an acute perforation occurs the peritoneum with its ally the omentum, tries to close the opening by means of a fibrinous plastic exudate. It is rarely successful for the reason that the peritoneum is unprepared for the sudden chemical and bacterial invasion therefore an operation should be performed as soon as a diagnosis has been made. According to statistics the mortality of cases operated on within the first twelve hours is twenty eight per cent. After twenty four hours the mortality is three times as great. Immediate operation with free drainage of the peritoneal cavity followed by the Ochsner treatment for the prevention of general peritonitis give the best results.

The most serious complication of gastric ulcer is malignant transformation which is usually recognized when all hope of a cure is gone. Dr. W. J. Mayo says "Cancer of the stomach is the most frequent and the most hopeless form of cancer in the human body. Early operation affords the victim the only chance of a cure."

The most important factor in the surgical cure of carcinoma is an early diagnosis. When carcinoma occurs in the stomach, physical signs and chemical tests are of little value. When the condition is still operable there are no positive symptoms. When symptoms are produced they are only suggestive and indicate some obstruction. After the age of forty — although carcinoma has no age limit — every individual who presents gastric symptoms of unknown etiology or which are suspicious of malignancy should be advised to have an exploratory laparotomy. With the use of nitrous oxide and oxygen this procedure is practically without danger or discomfort to the patient and it is a simple means of making an exact diagnosis. After seeing a large

number of cases of inoperable carcinomata of the stomach many of whom gave a history of being tortured with a stomach tube I am convinced that this is a just and humane procedure.

That carcinoma of the stomach like that of the uterus is curable has been proven. Although the percentage of surgical cures is still small, the mortality following medical treatment remains 100%. As a result of improvement in technique and the careful selection of cases the mortality following resection of the stomach for carcinoma has been reduced to seven per cent. Operative mortality seems to depend more on the condition of the patient than on the extent of the process. When the condition of the patient will permit, removal of the primary growth is justifiable even if there is lymphatic involvement. Palliative treatment by gastro-jejunostomy offers no hope and prolongs the suffering of the patient.

The following statistics from the Mayo Clinic will explain why surgery has offered so little for the cure of gastric carcinoma. Of 335 cases applying for treatment, 146 were considered hopeless and were not admitted to the hospital, seventy were explored and found to be inoperable, thirty-nine had a gastro-enterostomy performed. Only eighty or less than twenty-four per cent were considered operable. How many of the latter cases died of a recurrence I am not prepared to state but you can draw your own conclusions as to the small percentage that applied for surgical treatment when a cure was still possible.

The importance of operating in the precancerous stage and the etiological relationship between ulcer and carcinoma of the stomach which has been demonstrated clinically and microscopically are sufficient proof that gastric ulcer is a surgical disease.

THE PRESIDENT'S ADDRESS

Read at the Annual Meeting of the Medical Society of the County of Albany, May 8, 1912.

BY ARTHUR J. BEDELL, M. D.

In most medical societies the presiding officer has the advantage of a consulting board composed of men who have served in the same position and from whom valuable suggestions are received. Such advisers have been missed by me.

This evening I wish to speak about the welfare of this society and desire to do so under three divisions:

First, The work of the year just closing.

Second, Qualification of officers.

Third, Recommendations for improvement.

In June a letter was sent to every member asking for suggestions as to the kind of meeting desired and also urging each to assist in the year's work.

Before making the program many plans were considered and the one as carried out seemed best for two reasons. First, the individual needed the stimulus of personal effort, and second, the society needed its younger members in active work. Whether this scheme has been a success will be judged in the coming years by the attendance of the members and their interest in the progress of the society. It was because of this desire for mutual improvement that no outside speakers were invited.

We have had nine evenings including seven symposiums, altogether thirty-two members have presented papers, an unusually large number. Everyone who took part in the program profited himself by the study and preparation for his paper and all who were present received something of value in every day practice.

Perhaps it would be well to recall that during the winter months, Albany is a busy medical community, that the active college worker is crowded for time during the day, that usually two evenings a week are devoted to some of the various medical meetings and this is one reason why the society that should be the strongest, because of its large membership, has not been as efficient as we expect it to be. The social side of evening gatherings is especially attractive to the tired physician so naturally if his time is limited, he goes with the most congenial crowd, his own club or clique.

The Whist Club, the Clinical Club, the Monday Night Club and the Journal Club all meet twice a month. At these gatherings medicine is the subject but personal experience is more often quoted for the benefit of all.

We have tried to increase the fraternal spirit of this society by our after meeting lunches. Men come to know each other better and the differences of opinions and the seeming lack of courtesy, said to be often shown, are found to be another evidence of misquoting on the patient's or friend's part. I am

sure you have all enjoyed talking to your fellow workers after the scientific program and have looked forward to it as part of the evening's pleasure.

During the past year we have been fortunate in having many pathological specimens shown in the symposiums. The immense amount of material in the Bender Laboratory has been at our disposal to the betterment of our meetings and advancement of the practical knowledge of our members.

There seems to be doubt in the minds of some as to the value of this year's work. For their benefit we state that our attendance has never been as large. It has been said better have only one paper and that the best but I fear they are wrong for we are to help all members to a higher plane of thought and practice, first of all by teaching them how to value another's work and then to do more work themselves. Some men write papers because of their interest in the subject, because of the difficulties it presents and still others because they feel that they have a message of experience that may help some one else and all who will may gain sufficient benefit to compensate for the effort involved if each will do a part in the work of the meetings of our society.

On several occasions we have asked the members to offer papers other than in a symposium. One has been given a place to-night and the others offered at the last minute have been passed to my successor. A meeting could have been arranged for these papers and I regret that they were brought forward too late to be used.

One feature of our old society has been missed this year and that is the attendance of outside visitors. We have always welcomed our neighbors with genuine pleasure and wish to assure them that our desire for fellowship has increased not lessened.

SECOND. QUALIFICATION OF OFFICERS.

The president should be one familiar with the workings of this and other organizations and not a mere parliamentary debater but one cognizant of the needs of all the members and of the best means to help the greatest number. A man capable of arousing interest by selecting subjects of value and presenting them in most easily digested form. He should be one willing and able to work and one who has shown concern for this body

as a member by his presence at the meetings and activity in its progress.

The vice-president should be selected as an aide to the president. He should be a man of knowledge and practice so as to increase the mental tone of this society by his address.

The secretary must be a man of method whose careful attention to detail will assist the president in carrying out the affairs of the society. In no other office is experience of more value.

The treasurer has many unpleasant duties and must be selected with care. Members have to pay their dues in any club so we must pay ours and by doing so promptly, the work of the treasurer will be lessened and the annoyance of reminders avoided.

We have many committees who should be a source of strength to us as members and of pride to the community. The Board of Censors have power to materially raise the level of medical thought by reducing the number of illegal practitioners and cleaning our city and county newspapers of harmful advertisements. The Board of Censors should be composed of fearless men who regardless of outside opinion will deal fairly with the problems confronting them. They constitute the most important body in this society and should be selected for their ability to do the work before them.

Our different committees Health, Legislation, and Milk should be more active. We should appoint members from the other cities as well as Albany. Such committees have a field of usefulness not touched upon for years and it is to be hoped that even more thorough work will follow in the years to come. Greater publicity should be given certain details of medical advance by proper newspaper articles.

The delegates from this society should only be men who attend the meetings for which they are elected.

Third. The year has taught me several lessons and to state them as recommendations seem easiest.

The place of meeting of this society should be changed to a comfortable hall where refreshments could be served under more favorable conditions and the social side of the meeting be made more pleasant. The time of meeting should be arranged after consulting the presiding officers of the surrounding societies for at present all the county societies meet on the same evening preventing the desired visiting between the different cities. The hour of meeting should remain the same but members should be

more prompt in getting to the hall. The nature of the meeting must be decided upon by the officers in charge but I would recommend for consideration a change in any of the previous schemes as follows:

There should be a meeting in September preferably at one of the various hospitals. This meeting should be entirely clinical and devoted to the demonstration of the newest methods in diagnosis and treatment. There should be many on the program and all should have their subjects well in hand. Such a meeting would act as a stimulant for the harder work of the year. If feasible it could be repeated in May. Other societies use the hospitals to much greater advantage than ours.

There should be at least one meeting when some speaker of note would deliver an address and at such a time the members of the surrounding counties should be invited. This meeting would be best in the middle of the season.

A meeting open to the public should be arranged. At the last State Society session these meetings were attended by those interested and I am certain that some parents understand more about the conditions then explained. By the education of the public we have earlier co-operation when unusual treatment is demanded. The American Medical Association has a lecture bureau from which speakers may be secured free of cost.

The evening of the vice-president's address should be considered as the beginning of serious study. I would strongly urge the presentation of original effort and would also devise some means to get all at work. The modified symposium is the best way of treating most subjects and to aid in forming the program for the year I would ask all members to send the titles for symposiums on a separate disease, a single phase of a condition or anything they would like brought before the society. Active thought on the part of each member would give the work a decided impetus and aid our presiding officer in selecting subjects.

The meeting must begin promptly and close at a definite hour. We must learn to discuss papers by short, concise and relevant remarks, for all discussion should be limited. The anatomy and pathology of disease should be treated from the standpoint of one healing the sick and not from a text book view.

The nature of the president's address should be one of report and recommendation. I would urge the appointment of three

members to act as counsellors to the president and insist that only active men be selected.

The different committees should review their year of work and draw suitable conclusions. The Public Health and Milk Committee report should be exhaustive dealing with conditions in the entire county for this is a county society.

I would urge the careful selection of censors and that they be given greater power of action to deal with the infraction of the law.

Fellow members, in closing my year as your presiding officer I wish to thank you for honoring me and trust you will understand that in all things undertaken my purpose has been the accomplishment of the greatest good in our society work. To the many who have responded to my call for service, I extend my grateful acknowledgment and trust you have all felt the satisfaction of accomplishing something worth while. Dr. Bernstein of Bender Laboratory has been especially generous and we all thank him for his material assistance this year.

In closing, I extend to Dr. Draper my thanks for his untiring efforts to make the year a success and to the society by best wishes for a new year of increased activity and interest.

COOPERATION IN MEDICINE.

President's Address, delivered at the Annual Meeting of the Medical Society of the County of Albany, held at the Albany Medical College, Wednesday, May 10, 1911.

BY JOHN H. GUTMANN, M. D.,

It would not be very far from the usual custom of Presidents of county societies, if at this annual meeting, I were to recount our experiences of the past year, giving a statistical summary of the work accomplished, exploiting those issues which we have found to have been successful, and recalling to mind those meetings which have been of unusual interest to us. Modesty would have it, that at the same time, there must be some hint indicating our lament for our failures and shortcomings.

We have done our utmost to provide good material; to secure men of unquestioned ability to present papers on topics of current and lively interest, and our meetings have been uniformly valuable and successful. This has been made possible because

of the friendship and help that many of you have given me. The officers of the Society have aided me in every way, for all of which assistance I wish to extend my appreciation and my thanks.

Those sad gatherings necessitated by the deaths of our confreres will need no recounting. We have buried their mortal selves but their earnest work and good deeds will be with us constantly as stimuli toward bigger things and as models for emulation.

The simple citation of statistics, however, has never appealed to me and it would seem that this opportunity might best be employed in the discussion of some feature of our medical life, in order that it may tend to a better system, a higher efficiency, and a more satisfactory relationship between the professional members themselves.

It seems well enough to suggest our duty in matters relating to public legislation, to sanitation and hygiene, but all of these matters with others of like import and value fail and will continue to fail unless more essential and basic principles are recognized, and put into practice.

Whatever the medical practitioner may have been in the past, whatever the function of the county society may have been at the time of its charter, no matter what our fathers and their fathers may have found it necessary to do in order that medicine might flourish, it is a fact to-day that the "fads and fancies" of new cults and chimerical beliefs, of strange wanderings after new deities is made possible mainly because of the discord among the members of the profession and the lack of affiliation and honest cooperation. One trained finger may designate with unerring directness the path that leads to the Utopia of health but it requires the coordinate efforts of all concerned in order that enunciated principles may redound in assured facts. All of us do believe and should insist upon it "that good health should become more contagious than sickness." Not only is this affiliation necessary with respect to the abrogation of pseudo cults, quacks and charlatans, but it is absolutely necessary because of the wonderful development and expansion of medical thought within the last twenty-five years.

Medicine is so broad, so elaborately differentiated to-day that

no one mind can hope to encompass even a working part of its practical side.

In order that cooperation may work to the best interest of all it is necessary that every physician of a given community should possess those altruistic attributes and qualifications which make for harmony, for organization and for society. Such elements inherent in the individual when combined and in function with those of his neighbors, is so liberal, so considerate, so complimentary that the desired result is easily accomplished and all of the components are satisfied.

There has never been a more auspicious time than the present when the general practitioner has had a greater opportunity to put into practice the multitudinous principles of his medical skill. The public is exacting and willing, and almost demands that the physician shall make use of every means, every test, in order that its ailments may be rightfully diagnosed and treated. And what is more, the public will pay well for the time and energy expended, provided these are forthcoming. The general practitioner should make better, and more thorough examination of his patients; recording his facts and findings with precision; classifying his histories in order that he may draw such inferences as will be of interest to his fellow practitioners. What a fund of information would be available should every doctor keep a thorough record of his work; what a betterment in personal equation; what an increase of efficiency. I have no doubt that such a procedure would impress upon the mind of every patient the thoroughness and conscientiousness of every practitioner to such a degree, as to limit the number of consultations, the number of threatened malpractice complications, and would, in a great measure cement the ties which bind him to his medical adviser.

"The ideal physician must be a citizen first of all, and a citizen with large functions for society." He must be more than a mere medical man and in the treatment of his clientele he must at all times have in mind not only his duties to his patient, but his responsibilities to his fellow practitioners and to society.

In referring patients to consultants, the up-to-date practitioner will thus be able to furnish a thorough history, with such facts deduced from accurate and painstaking examination as seem to

him to be needful and essential to a proper consideration of the case. He will use the terms "in moderate circumstances" with caution and discretion, keeping in mind that patients quickly appreciate that it is sometimes cheaper to pay car fare and visit a consultant, than to see the home doctor. The patient gets something for nothing but both physicians lose by the transaction.

On the other hand, the consulting specialist owes a corresponding duty to the practitioner. A man who through special fitness and adaptability, by peculiar training, has placed himself in a position where he enjoys the appointment to hospital and medical college staffs and solicits patronage from the practice of the general physicians in the community, will not, except in emergency, step from the accustomed path of his specialty in order that he may do a mixed practice. He will respect the rights of other physicians and specialists. The best ideas to-day demand that if a man aspires to be a thorough clinical teacher, he shall do nothing but a strict consultation practice.

American medicine and American life have become so intensive that no one man can adequately cope with its exigencies single handed. Surgeons and internists will associate with themselves one or more men, of equal ability, employing a choir of trained assistants in order that the surgical or medical work may be prosecuted in the best manner. Such a combination provides ample attention and relief in the absence of one or several of the men who may be engaged in special study, in travel, or recreation. A fixed, constant, efficient organization begets confidence and greater resourcefulness.

Much of the distrust with which the general public has viewed the medical profession has arisen from the farcical and at times almost criminal efforts on the part of men of seemingly high standing, who rely almost entirely for their yearly income on their appearance in courts of law as medico-legal experts. Medical facts and data have been juggled and pampered to such a degree that physicians themselves are at times, at a loss to understand the innovations in disease entities and the seemingly bizarre forms that many of our pathological conditions may assume should the necessity arise. It is as if it were the merest trifle for the prolific expert to fit a disease to any particular aberrant criminal should the latter be unfortunate enough, not

to have made the proper selection himself. All aid should be afforded those who have under consideration, the adjustment of this feature of our medical life. The question should receive earnest attention without further delay.

In no other field is the need of cooperation more evident than in the charity and dispensary service we render indigent patients. It is hardly to be believed that less than 50% of all patients treated pay an adequate fee for the service they receive. The vicious practice of sending no-pay patients to nearby cities without proper arrangement with the consulting surgeon or internist is responsible for a condition of pauperization equalled only by the large number of city people who accept services of the best quality at the hands of indulgent dispensary doctors. It is difficult to believe that contract and society practice are not as yet done away with entirely. To-day many patients, in fairly good circumstances, receive hospital treatment without ever having the slightest notion of paying the attending physician.

Although legislation has done a great deal to stamp out the abuses usually incident to dispensary service, the attending physicians do not make sufficient effort to weed out those applicants who are manifestly unworthy. The large clinic, the necessities for teaching material, the fact that it pays to treat any kind of a patient, discourage the doctor from the weeding out process. It would be better for our students, if they were afforded the opportunity of studying a few selected cases thoroughly, rather than that they should see a number of inexplicable conditions. It must be kept in mind that chronic callers at the dispensary are a source of unending expense and that it seems the height of pauperization, for the physician to give his services for the alleviation of suffering among the indigent, and in addition, to pay a yearly sum for the maintenance of the institution. The visiting nurse, the social worker must investigate the industrial condition of the dispensary patient. The charity system of the city must be unified and centralized. Medical science and social science must be combined and the statistics of the patients of the individual dispensaries must fall under the control of a single organization.

Assuming these qualifications in the individual physician, it is easy to appreciate that the usefulness and influence of the

county society would be enhanced and multiplied to a marked degree. The attendance would be almost perfect and the scientific programs would be placed on a higher plane. The smaller clubs would take a subsidiary, though closely related attitude, holding their meetings at such infrequent intervals, so as not to interfere with the larger central organization. In this way it would be possible to fulfill those responsibilities and duties devolving upon us as a society in order that we may cooperate with other systematized movements for the welfare of the profession and the community in general. The members, through the society would be enabled to exercise their full activity in the district and in those relationships which they may have in common with the state organization. I believe that I am well within the scope of sound medical ethics when I say that these must be the thoughts which must activate us in our disposition of the local medical situation. Medical competition in surrounding cities is becoming so strong that unless we act in consonance, we will lose our right to be considered as the centre of medical thought of this part of the State. The welfare of this college and the future of medicine depend in a very great measure on the way in which the younger men comport themselves with reference to the problems that now present themselves to us.

Editorial

"Do you see, Catherine, I believe that doctors are useful when the sick cannot do without them; but if the disease is not violent, it is easier to recover with God's help than with their drugs: not taking into consideration that the mere presence of a doctor, which cures the rich, often kills the poor. He cheers and amuses those who live in luxury, but he scares and oppresses those who never see him except in the day of danger. It seems to me that Madame Blanchet will recover very soon if her affairs are straightened."

François the Waif.

GEORGE SAND.



The cure of disease by suggestion is as old as Psychotherapy, the practice of the healing art. Aesculapius is mythical, but the purpose of his devotees to impress pleasantly the senses, is revealed in the gardens, groves and flowers of his temples. Herophilus is said to have bridged the

space between the divinity of the Asclepiades and the beginnings of medicine. He was an anatomist, and he looked to something else than drugs for remedies. Erasistratos shared with him the glories of the Alexandrian School, and disputed his nihilism, but even he valued the power of mental healing. One of his famous cures was that of the son of Selukos, the Macedonian general. While Erasistratos was feeling his pulse, the stepmother of the young prince entered the room. She, the second wife of his father, was young and handsome, and Erasistratos noted that there was great perturbation of the pulse as soon as the stepmother came in. He correctly surmised that the young man was in love with the lady and that his illness had been occasioned by the feeling that the love was hopeless. The sharing of the secret seems to have started the young man's cure. Hippocrates was above all things practical, and the theme of the Hippocratic oath was the right living of the physician, such as he considered of benefit as a precept for his patients. And so on down through the ages.

Mental influences have been used to the point of quackery, as in the devices of Paracelsus, of Mesmer, of Braid, of Cagliostro and of Perkins; the vogue of the Fox girls, the magnetic healers, the Vitalists, the flagellants, the astrologists; the methods of the American medicine man, the African magician and the Asian mystic; and have been shown as well in faith in pilgrimages, electricity, amulets, talismans, charms, Unguentum Armarium, the Royal touch, homeopathy, allopathy, osteopathy, eclecticism, the water cure, the grape cure, blue glass and Graham bread. All of these are history. Medical science has approached each question analytically, has demolished its pretensions, and after its tangible effects have been found valueless, has placed it among the measures which play upon the imagination. For imagination, after all, is the lode-star of humanity.

Physicians have always known these things, but it remains for the layman of our day to discuss them anew and to attach to them a fictitious value. The age is one of publicity. Not now could a monastery, or a guild enshroud itself in the mystery which attaches to learning. The man on the street corner, having read his morning paper, is prepared to express a conclusive opinion on topics which puzzle an international tribunal. And he is ready to formulate ideas upon this most difficult of all

problems, the science of health and disease. To attract his attention, a catching title only is needed, and this is found in the word "psychotherapy." Under its rolling cadence the scientific structure of the ages is blown to the winds, and a new theory is galvanized into life. That every physician carries into the sick-room encouragement and hope, as the great factor of his resources, is forgotten in the enthusiasm of a supposedly new idea. Physicians have realized this power, without always knowing in just what it consisted. They have not analyzed their own personalities or their methods. And yet they are all, unwittingly perhaps, psychotherapists. New cults, whether of religious origin or otherwise, have seized upon this part of the practitioner's resources, deceiving themselves in the belief that it is novel and all powerful and assuming the part as the whole. They lack the foundation of real knowledge, and do harm.

It is worth while, then, to place this fad of psychotherapy in its true place, and this has now been done. Dr. James J. Walsh* has published an exhaustive treatise on the subject, in which the mental methods of daily practice are analyzed and the attitude of the physician toward both organic and functional diseases is described. At first thought, this would seem a short, and easy task, but, in reading Dr. Walsh's book, one is impressed with the picture of the physician as he intuitively discerns and combats the neurotic element in disease and its peculiarities under different conditions. The work is most valuable and timely. Dr. Walsh walks knee deep in legendary lore and modestly refrains from exhibition of his wide reading and erudition. His sense of propriety will not be offended, if we suggest that upon the cover of this useful volume, might be most appropriately emblazoned, as indicating its real value and purpose:

'Ιατὴρ, γνῶθι σεαυτόν!

**Psychotherapy*, including the history of the use of mental influence, directly and indirectly, in healing and the principles for the application of energies derived from the mind to the treatment of disease. By JAMES J. WALSH, M. D., Ph. D., Dean and professor of functional nervous diseases and of the history of medicine at Fordham University School of Medicine, and of physiological psychology at the Cathedral College, New York; fellow of New York Academy of Medicine; member A. M. A., A. A. A. S., New York State Medical Society, German Society for the History of Medicine and the Physical Sciences, New Orleans Parish Medical Society, St. Louis Medical History Club, etc. New York and London, D. Appleton & Company, 1912.

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH—ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, AUGUST, 1912.

Deaths.

Consumption	17
Typhoid fever.	1
Scarlet fever.	0
Measles.	0
Whooping-cough.	1
Diphtheria and croup.	0
Grippe.	0
Diarrheal diseases.	11
Pneumonia.	5
Broncho-pneumonia.	5
Bright's disease.	11
Apoplexy.	5
Cancer.	12
Accidents and violence.	10
Deaths over 70 years.	26
Deaths under 1 year.	27
<hr/>	
Total deaths.	145
Death rate.	17.06
Death rate less non-residents.	13.53

Deaths in Institutions.

	Non-Resident.	Resident.
Albany Hospital.	10	10
Albany Orphan Asylum.	0	0
Child's Hospital.	0	1
County House.	0	3
Home for the Friendless.	0	0
Homeopathic Hospital.	2	1
Hospital for Incurables.	0	3
House of Good Shepherd.	0	1
House of Shelter.	1	0
Little Sisters of the Poor.	1	0
Public Places.	3	1
Penitentiary.	0	0
Sacred Heart Convent.	0	0
Dominican Convent.	1	0
St. Margaret's House.	3	2
St. Peter's Hospital.	8	2

Austin Maternity Hospital.....	0	0
Albany Hospital, Tuberculosis Pavilion.....	2	1
Labor Pavilion.....	0	1
Totals.	31	26
Births.	167	
Still births.	9	
Premature births.	2	

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever.	10	
Scarlet fever.	2	
Diphtheria and croup.	8	
Chickenpox.	2	
Measles.	9	
Whooping-cough.	0	
Consumption.	21	
Total.	52	

Contagious Disease in Relation to Public Schools.

None reported.

Number of days quarantine for diphtheria:

Longest..... 18 Shortest..... 11 Average..... 14½

Number of days quarantine for scarlet fever:

None.

Fumigations:

Houses..... 21 Rooms..... 88

Cases of diphtheria reported.

8

Cases of diphtheria in which antitoxin was used.

8

Cases of diphtheria in which antitoxin was not used.

0

Deaths after use of antitoxin.....

0

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BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive.	10	
Negative.	6	
Failed.	0	
Total.	16	

Living cases on record August 1, 1912.....	318
Cases reported during August:	
By card.....	16
Dead cases by certificate.....	5
	— 21
Total	339
Dead cases previously reported.....	
Dead cases not previously reported.....	5
Duplicates.	4
Lost track of.....	6
Died out of town.....	1
Recovered.	3
Removed.	7
Died without report.....	1
	— 39
Living cases on record September 1, 1912.....	300
Total tuberculosis death certificates filed during August.....	17
Out of town cases dying in Albany:	
Albany Hospital Camp.....	1
Pavilion of Labor.....	1
Albany Hospital.	1
St. Margaret's House.....	1
House of Good Shepherd.....	1
	— 5
Net city tuberculosis deaths.....	12
REPORT OF VISITING TUBERCULOSIS NURSE.	
Cases remaining under supervision.....	12
New cases.	9
Total	21
Cases sent to hospital.....	1
Number died.	4
Left city.	2
Cases no nurse wanted.....	3
Cases remaining under supervision.....	11
	— — 21
Total number of visits made.....	46

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive.	19
Initial negative.	45
Release positive.	2
Release negative.	10
Failed.	5
<hr/>	
Total.	81

Test of sputum for tuberculosis:

Initial positive.	12
Initial negative.	11
Failed.	2
<hr/>	
Total.	25

BUREAU OF MARKETS.

Market reinspections.	114
Public market inspections.	22
Fish market inspections.	2
Rendering plant inspections.	1
Slaughter house inspections.	3
Hide house inspections.	3
Pork packing house inspections.	4

MISCELLANEOUS.

Mercantile certificates issued to children.	8
Factory certificates issued to children.	12
Children's birth records on file.	20
Number of written complaints of nuisances.	43
Privy vaults.	1
Closets.	3
Drains.	1
Plumbing.	15
Other miscellaneous complaints.	23
Cases assigned to health physicians.	56
Calls made.	128

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR AUGUST, 1912.—Number of new cases, 123; classified as follows: Dispensary patients receiving home care, 14; district cases reported by health physicians, 7; charity cases reported by other physicians, 30; moderate income patients, 60; metropolitan patients, 12; old cases still under treatment, 101; total number of cases under nursing care during month, 224. Classification of diseases for the new cases: Medical, 36; surgical, 5; gynecological, 5; obstetrical under professional care, mothers 34, infants 33; infectious diseases in the medical list, 10. Disposition: Removed to hospitals, 4; deaths, 5; discharged cured, 97; improved, 7; unimproved, 6; number of patients still remaining under care, 105.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 2; nurses in attendance, 2; patients carried over from last month, 1; new patients during month, 2; patients discharged, 3; visits by head obstetrician, 0; visits by the attending obstetrician, 0; visits by students, 27; visits by nurses, 29; total number of visits for this department, 56.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,023; for professional supervision of convalescents, 514; total number of visits, 1,537; cases reported to the Guild by four health physicians and thirty-five other physicians; graduate nurses 9, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 77; new patients, 104; old patients, 305; total number of patients treated during month, 409. Classification of clinics held: Surgical, 13; eye and ear, 9; skin and genito-urinary, 6; medical, 16; lung, 9; Nervous, 3; children, 14; gynecological, 7.

ALBANY MEDICAL COLLEGE.—The Introductory Lecture of the Eighty-second Session of the Albany Medical College was delivered by Professor Henry Hun, M. D., in the Amphitheatre of the College, on Tuesday, September 24, 1912, at 12 m.

THIRD DISTRICT BRANCH, MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The sixth annual meeting of the Third District Branch of the Medical Society of the State of New York was held at Troy, N. Y., October 1, 1912. The following program was read:

Tuesday Morning October 1, 1912—Troy Hospital.—Surgical Clinic, 9 to 11.30 A. M., Drs. D. W. Houston, J. B. Harvie and M. D. Dickinson. Medical Clinic, 9 to 11.30 A. M., Drs. M. Keenan, Z. Rousseau, O. Mallet and LaS. Archambault. Eye and Ear, Dr. L. F. Adt. Nose and Throat, Dr. B. S. Booth.

Samaritan Hospital.—Surgical Clinic, 9 to 11.30 A. M., Drs. J. P. Marsh, G. L. Meredith, J. B. Harvie and L. B. Schneider. Medical Clinic, 9 to 11.30 A. M., Drs. H. C. Gordinier, E. R. Stillman, W. L. Hogeboom and E. W. Becker. Nose and Throat, F. K. Roarke, M. D., Troy.

Lake View Sanatorium.—Tuberculosis Clinic, 10 A. M., Dr. H. W. Carey.
Marshall Sanatorium.—Dr. C. J. Patterson, 10 A. M.

Leonard Hospital.—Medical and Surgical Clinic, 10 A. M.

Business Session, 12.30 P. M.—Meeting of House of Delegates at the Troy Club.

Election of Officers.

The following amendments to the By-Laws which were proposed at the annual meeting held at Kingston, October 3, 1911, was acted upon at this meeting.

Amend Section 3, Chapter II, by striking out the words "on January 1st of" and substituting the words "at the close of the annual meeting of the Medical Society of the State of New York."

Luncheon was served at the Troy Club at 1 P. M., to all members and their friends by the Medical Society of the County of Rensselaer.

Scientific Session, 1.45 P. M.—Supervisors Room, Court House.

President's Address, John B. Harvie, M. D., Troy.

1. Some Observations in the Surgical Treatment of Cholecystitis, Mark O'Meara, M. D., Kingston.

2. Title to be announced, J. Montgomery Mosher, M. D., Albany.

3. A Clinical Study of the Practical Value of Auto-inoculation in the Treatment of Pulmonary Tuberculosis, Pret de Bloeme, M. D., Loomis Sanitarium, Liberty.

4. The Clinical and Pathological Study of a Case of Primary Malignant Diseases of the Pleura, H. J. Bernstein, M. D., Bender Laboratory, Albany.

5. Spontaneous Fracture as an Early Symptom of Tabes Dorsalis, Henry Ling Taylor, M. D., New York City.

6. A Common Error in the Diagnosis of Diseases of the Joints, Wisner R. Townsend, M. D., New York City.

7. Carcinoma of the Rectum, Sherwood V. Whitbeck, M. D., Hudson.

8. The Significance of Dyspepsia, John McGarrahan, M. D., Cohoes.

9. The Report of a Rare Case of Exfoliation of the Cornea Corresponding to Dermatitis Exfoliativa, Clark G. Rossman, M. D., Hudson.

10. Some Remarks on the Code of Ethics, Robert Selden, M. D., Catskill.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held at the County Court House, Tuesday, September 13, 1912, at 8.30 P. M. Dr. D. S. Vass reported a case of "Syphilis of the Cord." Dr. C. B. Witter read a paper on "Eclampsia."

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY.—The third annual meeting of the American Association for Study and Prevention of Infant Mortality will be held at Cleveland, Ohio, October 2 to 5 inclusive.

ALBANY HOSPITAL NURSE TRAINING SCHOOL.—The graduating exercises and reception of the Albany Hospital Nurse Training School were held at the Nurses' Home, Albany Hospital, Tuesday, September 17, at three o'clock.

NEW YORK AND NEW ENGLAND ASSOCIATION OF RAILWAY SURGEONS.—The twenty-second annual session of the New York and New England Association of Railway Surgeons will be held at the Hotel Astor, New York City, on Wednesday, November 13, 1912. A very interesting and attractive program has been arranged. Dr. John B. Murphy, of Chicago, will deliver the address in "Surgery." Railway surgeons, attorneys and officials, and all members of the medical profession are cordially invited to attend.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.—Professor Dr. H. Strauss of Berlin will lecture at the New York Post-Graduate Medical School and Hospital, on October 12th, 14th and 15th, on the "Diseases of the Stomach and Kidneys." Professor Dr. Carl von Noorden, Physician in Chief to the City Hospital, Frankfort, Germany, will also deliver a series of lectures on the "Pathology and Treatment of Diabetes, Radium Therapy and Arterio-sclerosis" at the same place, on October 26th to 31st inclusive.

NATIONAL ASSOCIATION FOR THE STUDY OF PELLAGRA.—The National Association for the Study of Pellagra will hold its second triennial meeting at the State Hospital for the Insane, at Columbia, S. C., on October 3d and 4th. The titles of forty-one papers are announced besides a considerable number of participants not cast for papers, including surgeons of the Army and Navy, men from countries where Pellagra is prevalent and a considerable number from the Southern States. Dr. F. C. Curtis, of Albany, N. Y., will give an address on "The History of Pellagra in the State of New York" which will be presented under Etiology, Epidemiology and Statistics; Local History and Diagnosis; Laboratory Investigations of Pellagra; Clinical Features and Treatment of Pellagra. Lantern slide exhibitions will be given and demonstrations of cases.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—With the opening of the fall school term, over 200 open-air schools and fresh-air classes for tuberculous and anaemic children, and also for all children in certain rooms and grades, were opened in various parts of the United States. All of these schools have been established since January, 1907, when the first institution of this character was opened in Providence, R. I. On January 1, 1910, there were only thirteen open-air schools in this country, and a year later the number had increased only to 29. Thus, the real growth in this movement has been with the last two years.

Massachusetts now leads the states with eighty-six fresh-air schools, Boston alone having over eighty. New York comes next with twenty-nine, and Ohio is third with twenty-one. Open-air schools have now been established in nearly fifty cities in nineteen different states.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—"Probably not more than one person in every hundred, taking the country as a whole, gets enough fresh air to ward off the ordinary attacks of dangerous infections and contagious diseases," says Dr. Livingston Farrand, Executive Secretary of the National Association for the Study and Prevention of Tuberculosis, in a statement issued from the association's headquarters in New York.

"People," continues Dr. Farrand, "fail to get enough fresh air either because their lungs, or other respiratory organs are affected, or, more generally, simply because they do not open the windows and doors. For the former class a physician is needed, but for the latter, plain directions on how to live, work, play and sleep in the open air will do more than hospitals and drugs."

To meet the need of this latter group—not especially those who are sick, but those who are seemingly well—the National Association has prepared a handbook on "Fresh Air and How to Use It" written by our expert, Dr. Thomas Spees Carrington. This book is designed to prevent tuberculosis by showing those people how to ward off the attack of consumption by living and sleeping in the open air. Failure to get enough fresh air by working and sleeping in poorly ventilated overcrowded rooms is one of the most prolific causes of tuberculosis and also of a host of other infectious diseases. This free gift of Nature is probably the world's best medicine not only in the treatment but also in the prevention of disease.

PREVENTION OF INDUSTRIAL DISEASES IN NEW YORK.—Over \$366,000,000 was lost in wages through over 13,400,000 cases of sickness among wage earners in the United States last year, according to a booklet on industrial diseases mailed by the New York Department of Labor to the 14,000 physicians, hospitals, and dispensaries in the state. Attention is called to the fact, that for the purpose of preventing so much of these diseases as are directly due to harmful and avoidable industrial processes, reports of certain diseases of occupation are now by law required to be filed with the department by physicians practicing in the State.

It is the intention of the department to inform manufacturers and physicians of preventive and safer industrial methods and it is hoped that with the assistance of the medical profession, the necessary facts may be gathered not only as to the six reportable diseases, but also as to any other diseases clearly attributable to employment. For this purpose the Department's Quarterly Bulletin containing valuable material on industrial diseases is circulated widely among manufacturers. In addition to this, a certificate has been sent to physicians, hospitals and dispensaries in the State, in form similar to U. S. Standard Death Certificate with which physicians are generally familiar. As the relation of industry to disease and the effect of occupation upon health is so little recognized among physicians in this country, each reporting blank is accompanied by the booklet which was prepared for the Department of Labor by the Committee on Industrial Diseases of the New York Association of Labor Legislation. Made in a convenient size in a vest pocket the booklet

explains the new reporting law, and that its enactment has become necessary in consequence of conditions of modern life by which new substances are used in the arts and manufacturers. "Special uses of nerves and muscles," it is stated, "bring about their definite occupational diseases in the operation and control of machinery, and special strains result from lack of variety in work, from concentration, and from the haste involved in competition or speeding up." The more important harmful substances, an indication of the industries in which they are more commonly prepared or used, the mode in which they enter the body, and the diseases or symptoms in which they give rise, are printed in four parallel columns as a ready guide to the physician.

INTERNATIONAL CONGRESS ON HYGIENE AND DEMOGRAPHY.—The fifteenth International Congress on Hygiene and Demography which met in Washington, D. C., September 23d to 28th and the exhibition opened from September 16th to October 5th, presented the most magnificent challenge ever opened to the medical men of the United States.

CLIFTON SPRINGS SANITARIUM.—Dr. James G. Mumford of the Massachusetts General Hospital has been appointed superintendent and physician-in-chief of the Clifton Springs Sanitarium.

ASSISTANT IN EXPERIMENTAL THERAPEUTICS (MALE), PHILIPPINE SERVICE, OCTOBER 11, 1912.—The United States Civil Service Commission announces an open competitive examination for assistant in experimental therapeutics, Philippine Service, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in the position of research assistant in experimental therapeutics in the Bureau of Science, in Manila, Philippine Islands, at a salary of \$2,000 a year, and vacancies as they may occur requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

It will not be necessary for applicants to appear at any place for examination. Their eligibility will be determined upon the evidence furnished in connection with application and examination Form B. I. A. 2, concerning their training and the work which they have accomplished.

Applicants must be graduates in medicine, and in addition must show at least one year's postgraduate experience in conducting laboratory research work in experimental therapeutics, or, as equivalent to the year's work, they may submit copies of publications prepared by them, evidencing their ability to carry on original experimental therapeutic work. A person is desired who is especially qualified in research, and it is stated that, for one who is satisfactory, the prospects of promotion are excellent.

Statements as to training, experience, and fitness are accepted subject to verification.

Applicants must have reached their eighteenth but not their fortieth birthday on the date of the examination.

The medical certificate on Form B. I. A. 2 must be executed by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian, or Public Health and Marine-Hospital service. If such an officer can not be conveniently visited, a pension-examining surgeon may execute the certificate. Special arrangements have been made with pension-examining boards throughout the country to give such examination for a fee of \$2, to be paid by the applicant. This certificate must not be executed by the family physician of the applicant. The medical officer should indicate his rank or official designation on such certificate. When it is impracticable, by reason of the applicant's distance from a Government physician or a pension-examining surgeon, to have the medical certificate executed by such physician, it may be executed by any reputable physician. Such person may be required to undergo another examination in case of appointment.

Each applicant will be required to submit with his application a photograph of himself, taken within three years, which will be filed with his papers as a means of identification. An unmounted photograph is preferred. The name and date of examination, the competitor's name, and the year in which the photograph was taken should be indicated.

This examination is open to all male citizens of the United States who comply with the requirements.

Special attention is invited to the favorable conditions in respect to transportation, leave of absence, clothing, etc., in this service, printed hereon.

Persons who comply with the requirements and desire this examination should at once apply for Form B. I. A. 2 to the United States Civil Service Commission, Washington, D. C.; the secretary of the board of examiners, post office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; custom-house, New York, N. Y., New Orleans, La., Honolulu, Hawaii; old custom-house, St. Louis, Mo.; or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, including the medical certificate, and filed with the Commission at Washington prior to the hour of closing business on October 11, 1912. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

MEDICAL INTERNE, GOVERNMENT HOSPITAL FOR THE INSANE, OCTOBER 23, 1912.—The United States Civil Service Commission announces an open competitive examination for medical interne, on October 23, 1912, at the places mentioned in the list printed hereon. From the eligible register resulting from this examination certification will be made to fill two vacancies in the position of medical interne, Government Hospital for the Insane, Washington, D. C., at \$600 per annum, with maintenance, and vacancies as they may occur in that hospital requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The positions are tenable for one year, and pay \$50 a month and maintenance. At the end of six months, however, during which time a post-graduate course in mental and neurological diagnostic methods, etc., is given, an examination is held, and promotions to the next grade, assistant physician, at \$75 a month and maintenance, are made. Beyond this there is regular advancement for men whose services are satisfactory. The Government Hospital for the Insane has over 2,900 patients and about 750 employees to care for. In addition to the general medical practice offered, the scientific opportunities are excellent and the clinical opportunities in neurology and psychiatry are unsurpassed.

As considerable difficulty has been experienced in filling vacancies in the position of medical interne in the Hospital Service during the past several years owing to the limited number of eligibles available, qualified persons are urged to enter this examination.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

<i>Subjects.</i>	<i>Weights.</i>
1. Letter writing (the subject matter on a topic relative to the practice of medicine).....	5
2. Anatomy and physiology (general questions on anatomy and physiology, and histologic or minute anatomy).....	10
3. Chemistry, <i>materia medica</i> , and therapeutics (elementary questions in inorganic and organic chemistry, the physiologic action and therapeutic uses and doses of drugs).....	15
4. Surgery and surgical pathology (general surgery, surgical diagnosis, the pathology of surgical diseases).....	20
5. General pathology and practice (the symptomatology, etiology diagnosis, pathology, and treatment of diseases).....	25
6. Bacteriology and hygiene (bacteriologic methods, especially those relating to diagnosis; the application of hygienic methods to prophylaxis and treatment).....	10
7. Obstetrics and gynecology (the general practice of obstetrics, diseases of women, their pathology, diagnosis, symptoms, and treatment, medical and surgical).....	15
 Total.....	<hr/> 100

Graduation from a reputable medical college is a prerequisite for consideration for this position.

Applicants must not have been graduated more than two years prior to the date of the examination unless they have been continuously engaged in hospital, laboratory, or research work along the lines of neurology or psychiatry since graduation, which fact must be specifically shown in the application.

Both men and women will be admitted to this examination, although there are no vacancies for women at present. Applicants must be unmarried.

Age, 20 years or over on the date of the examination.

This examination is open to all citizens of the United States who comply with the requirements.

Persons who comply with the requirements and desire this examination should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the board of examiners at any place mentioned in the list printed hereon, for Form 1312. No application will be accepted unless properly executed and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to the places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

DENTIST (MALE), INDIAN SERVICE, OCTOBER 23, 1912.—The United States Civil Service Commission announces an open competitive examination for dentist on October 23, 1912, at the places mentioned in the list printed hereon, for men only. From the register of eligibles resulting from this examination certification will be made to fill five vacancies in the position of dentist at \$1,500 per annum each, in the Indian Service at Large, and vacancies as they may occur requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The Office of Indian Affairs states that in addition to the salary mentioned the incumbents in these positions will be allowed actual and necessary traveling expenses, subsistence, and incidentals while on duty in the field.

These employees will have no fixed place of abode, but will be required to travel from school to school as the needs of the service require.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

<i>Subjects.</i>	<i>Weights.</i>
1. Letter writing (the subject matter on a topic relative to the practice of dentistry).....	5
2. Anatomy and physiology (general questions on these branches, also with special reference to the teeth, mouth, and head).....	10
3. Chemistry, <i>materia medica</i> , and therapeutics (the preparations, properties, and reactions of chemicals, crude drugs and their preparations, their action and application, with those of other therapeutic agencies).	15
4. Dental pathology and oral surgery (the morbid processes incident to diseases and injuries of the teeth, mouth, and contingent structures, and their surgical treatment).....	20
5. Operative and prosthetic dentistry (the detailed technics of general and special operative and laboratory work).....	25

6. Bacteriology, histology, and hygiene (the cultivation, isolation, demonstration of bacteria, the principles of sterilization, mounting specimens, use of microscope, the principles of general and oral hygiene, etc.).....	10
7. Orthodontia (local and constitutional irregularities in growth and development of the teeth, and their correction).....	15
Total.....	100

Graduation from a regularly incorporated dental college and at least two years' experience in the practice of dentistry subsequent to graduation from such college is a prerequisite for consideration for this position.

Statements as to training, experience, and fitness are accepted subject to verification.

Applicants for the Indian Service must be in good health.

Applicants must have reached their twenty-fifth but not their fortieth birthday on the date of the examination.

This examination is opened to all male citizens of the United States who comply with the requirements.

Persons who comply with the requirements and desire this examination should at once apply either to the United States Civil Service Commission, Washington, D. C., or to the secretary of the board of examiners at any place mentioned in the list printed hereon, for application and examination Form 1312. No application will be accepted unless properly executed, including the medical certificate, and filed with the Commission at Washington. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

As examination papers are shipped direct from the Commission to places of examination, it is necessary that applications be received in ample time to arrange for the examination desired at the place indicated by the applicant. The Commission will therefore arrange to examine any applicant whose application is received in time to permit the shipment of the necessary papers.

PERSONALS.—Dr. WILLARD H. MORSE (A. M. C. '80), is now at 55 Allen St., Hartford, Conn.

—Dr. DANIEL GILLILAND (A. M. C. '85), is now at the Masonic Home, Utica, N. Y.

—Dr. WILLIAM B. CAMPBELL (A. M. C. '86), is now at Edmeston, N. Y.

—Dr. A. MARSHALL BURT (A. M. C. '89), is now at Ballston Lake, N. Y.

—Dr. GEORGE T. MASTON (A. M. C. '90), is now at North Creek, N. Y.

—Dr. WILLIAM KNOWLTON (A. M. C. '91), is now at St. Louis, Mo.

—Dr. GEORGE J. VAN VECHTEN (A. M. C. '91), is now at 1324 Mulberry St., Scranton, Pa.

—Dr. PATRICK J. BARRETT (A. M. C. '92), is now at Tupper Lake, N. Y.

—Dr. FRED D. VICKERS (A. M. C. '93), is now at Little Falls, N. Y.

—Dr. ALLEN M. JOHNSON (A. M. C. '95), is now at Marquez, Texas.

- Dr. FRED MARKLE (A. M. C. '97), is now at Pleasantville, N. Y.
- Dr. WILLIAM SHEEHAN (A. M. C. '97), is now at Port Chester, N. Y.
- Dr. FREDERICK F. BURTIS (A. M. C. '98), is now at 522 W. 136th St., New York City.
- Dr. JULIAN A. GAUL (A. M. C. '98), is now at Halcottsville, N. Y.
- Dr. DAN L. VANDERZEE (A. M. C. '98), is now at Oxford, N. Y.
- Dr. ALBERT E. GARLAND (A. M. C. '99), is now at Y. M. C. A., Boston, Mass.
- Dr. WILLIAM H. RANKIN (A. M. C. '99), is now at 151 Hancock St., Brooklyn, N. Y.
- Dr. CLARENCE L. SICARD (A. M. C. '01), is now at the Hudson River State Hospital, Poughkeepsie, N. Y.
- Dr. SAM BASCH (A. M. C. '03), is now at 311 E. 86th St., New York City.
- Dr. STANTON ROWE, JR. (A. M. C. '05), is now at Cambridge, N. Y.
- Dr. JAMES W. FLEMING (A. M. C. '08), is now at 1 Steuben Park, Utica, N. Y.
- Dr. CHARLES L. RUSSELL (A. M. C. '09), is now at Fishkill-on-Hudson, N. Y.
- Dr. SAMUEL J. SELKIN (A. M. C. '10), is now at 75 Hawthorn Ave., Yonkers, N. Y.
- Dr. JAMES M. MOORE (A. M. C. '94), of Albany, N. Y., has returned from Europe.
- Dr. WALTER E. HAYS (A. M. C. '05), has removed from 500 W. 144th St. to 543 W. 146th St., New York City.
- Dr. WILLIAM A. KREIGER (A. M. C. '06), of Poughkeepsie, N. Y., has returned from abroad.
- Dr. JOSEPH L. BENDELL (A. M. C. '07), has started private practice at 172 State St., Albany, N. Y.
- Dr. JEROME MEYERS (A. M. C. '07), has removed from 238 Hamilton St., to 206 State St., Albany N. Y.
- Dr. WILLIAM D. ALLEN (A. M. C. '10), has left Bender Laboratory and is assisting Dr. Edgar A. Vander Veer.
- Dr. CYRUS S. MERRILL, of Albany, N. Y., returned from Europe, September 7th.

The present address of the following members of the Alumni is unknown. We will be glad to receive information concerning them:

- Dr. JOHN N. OLIVER (A. M. C. '60).
- Dr. EDWARD J. DAVIS (A. M. C. '67).
- Dr. PHILIP C. CROMWELL (A. M. C. '70).
- Dr. WILLIAM C. BAILEY (A. M. C. '73).
- Dr. EDGAR W. MASTEN (A. M. C. '79).
- Dr. THOMAS HAYS (A. M. C. '81).
- Dr. FRANK A. BELL (A. M. C. '89).
- Dr. ARCHIE I. CULLEN (A. M. C. '05).
- Dr. EDWARD W. JACKSON (A. M. C. '07).
- Dr. RAYMOND MESSER (A. M. C. '09).
- Dr. JOHN B. BURKE (A. M. C. '11).

MARRIED.—Dr. GEORGE E. BEILBY (A. M. C. '99), of Albany, N. Y., and Miss Effie Nettleton, also of Albany, were married in July, 1912. Dr. and Mrs. Beilby are now in Europe.

—Dr. GEORGE W. DUFFY (A. M. C. '10), of Nassau, N. Y., and Miss Anna E. Walker, of North Chatham, were married June 5, 1912.

—Dr. PERCY H. FINCH (A. M. C. '11), of Broadalbin, N. Y., and Miss Marion E. Dye, of New York City, were married at Hotel Belmont, New York.

DIED.—Dr. EDWARD M. ROOT (A. M. C. '56), Surgeon of the One Hundred and Sixty-Eighth New York Volunteer Infantry during the Civil War, for nearly fifty years a practitioner of Painesville, Ohio, died in the Painesville Hospital, August 9, aged 80.

Current Medical Literature

SURGICAL PATHOLOGY

Edited by George E. Beilby, M. D.

Considerations Relating to the Pathogenesis and Diagnosis of Surgical Diseases of the Pancreas.

LEVI J. HAMMOND. *Annals of Surgery*, Vol. LIV. page 798, December 1911.

The intimate relation each disease met with in the upper abdomen bears to the other, especially from the viewpoint of cause and effect, makes it well nigh impossible to separate either from the other without omitting much valuable information common to them all. Indeed, it was through a search into the complications of bile-duct disease, especially calculi, that our present knowledge of pancreatitis was acquired.

The subject must therefore involve a consideration of not only the existence of the three major organs, the liver and its ducts, pancreas and duodenum, but the surgeon must have, as well, a working knowledge of their embryology, anatomy and physiology, in order that he may properly understand the important relation the organic internal secretions bear to digestion and assimilation. The intimate anatomic relation of the stomach, duodenum, liver and pancreas through the close association of the main duct of the two latter and the viscera, must always be borne in mind in undertaking differential diagnosis. For example, the pancreas, which is an organ of both external and internal secretions, has its internal secretion intimately associated with the glands of Brunner, situated in the duodenum, while its external secretion is even more closely associated with that of the bile.

In this connection the author discusses the anatomy of the pancreas and its relation to the surrounding organs and to the excretory ducts and their method of entrance into the duodenum. He calls attention to the fact that the embryologic development of the pancreas, as two separate outgrowths from the primary foregut to afterward coalesce, is

important to keep in mind as it often retains two separate ducts, Wirsung and Santorini. The latter is the direct duct, yet in 20 per cent of cases it undergoes complete obliteration, while in the remaining 80 per cent it anastomoses with the indirect or duct of Wirsung and empties by a separate orifice into the duodenum. In one individual out of ten the duct of Santorini is even of larger calibre than the duct of Wirsung. In such cases as this, the pancreatic secretion will be emptied into the duodenum even when the Wirsung duct is occluded.

The common bile-duct in conjunction with the duct of Wirsung enters the under surface of the second portion of the duodenum through a vestibule, the ampulla of Vater, where the secretions from the two glands are mixed before they take their respective places in the digestive process.

This anatomic relation has its physiologic significance in showing the importance of associating bile in the process of digestion. As the author states, from a pathologic standpoint, this association is most unfortunate for it is the factor in causing many of the morbid processes to which both the pancreas and bile passages are subject. In two-thirds of all cases the bile duct passes directly through the head of the pancreas on its way to the duodenum. This fact, together with the close vascular and lymphatic association between the bile passages and pancreas, furnishes the pathogenesis of the greater number of the cases of pancreatitis.

In regard to the symptoms the author admits that the accurate clinical diagnosis is rarely made. The symptoms most commonly present at the onset of an acute pancreatitis are agonizing pain, deep-seated and referred to the right of the epigastrium and followed by great prostration, rapid pulse, early elevation of temperature, nausea, vomiting and early tympanites accompanied by marked cyanosis, especially about the face and abdominal walls. He admits that this group of symptoms does not differ materially from those arising from such acute conditions as intestinal obstruction, perforation of the hollow viscera, renal colic or ectopic gestation. Sugar may be present in the urine in some cases where chronic pancreatitis has existed for a considerable period. Free fat (according to Fitz) may be seen in the feces upon inspection. It is fortunately a condition where accuracy of diagnosis is not essential since the simulating conditions all require surgical intervention.

The statistics of various operators place the mortality in cases not operated upon at about 75% or higher. Those cases where immediate operation is performed, one-half or more of the cases are saved.

The treatment which is surgical from the onset because of the profound toxæmia that actually ushers in the attack should consist of promptly establishing free drainage through the incisions made in several parts of the gland. If excessive hemorrhage ensues it can be controlled by gauze packings held in place by sutures. The final step should be to establish free drainage through the abdominal suture. If stones are present in the gall-bladder or bile-ducts, or there is acute infection of the bile-ducts with jaundice, it is necessary in addition to free the gall-bladder and ducts of accumulated caluli, and establish drainage by a right lateral incision through the anterior abdominal wall, provided the patient's condition may permit.

*Studies on Peritoneal Adhesions, With a Contribution to the Treatment of Denuded Bowel Surfaces.*EDWARD H. RICHARDSON, *Annals of Surgery*, Vol. LIV, No. 6, December 1911.

The problem of peritoneal adhesions is one that merits the serious consideration of everyone engaged in abdominal surgery. That this fact is generally recognized is indicated by the large number of valuable contributions to the subject—including not only elaborate experimental researches of the most diversified sort, but also carefully recorded clinical observations—contained in the literature of the past twenty-five years.

It was the author's purpose in this communication to present a collective and analytical review of the literature and classify along practical lines, to impartially weigh the evidence, and to draw such conclusions as seemed warranted. In connection with this critical study he describes a new and original method of dealing with denuded bowel surfaces. He believes that much of the existing confusion could have been avoided if investigators had kept in mind the fact that peritoneal adhesions, like bacteria, are of two kinds—those which are useful and of essential worth to mankind, and those which are harmful and injurious to life or health. They represent in every instance nature's best method of defense or repair. In dealing with peritoneal adhesions the abdominal surgeon will find that he has recourse to three classes of procedure: (1) measures which prevent adhesions, (2) measures which restrict their formation to the harmless variety, and (3) measures which aid in their absorption.

Before taking up these various procedures, the author considers the various characteristics of the peritoneum itself which have an important bearing upon this problem, as, for instance, the enormous area of this serous membrane which has been estimated to be only slightly less than that of the skin, its great absorptive power and the well known ability of the peritoneum to successfully cope with infection without itself being seriously or permanently damaged.

The studies of the author and of various other investigators point to the fact that peritoneal surfaces may agglutinate with destruction of the endothelial layer, but in true adhesions the endothelium is always destroyed. If, however, the basement membrane is destroyed also, Richardson believes that the adhesions may later separate, otherwise the union is rendered permanent through the formation of fibrous tissue. It seems to him therefore that the pathological changes involved in the process of adhesion formation in the peritoneal cavity are in order of sequence: (1) injury or death of the surface endothelium, (2) pouring out of coagulable exudate, (3) agglutination, (4) organization, (5) fibrous tissue formation, which terminates ultimately in (6) a contracted scar. Observe that the whole process is dependent upon and subsequent to injury to, the surface endothelium.

It is therefore necessary to consider the various agencies ordinarily coming in contact with the peritoneum that might be considered injurious to the vitality of the endothelium. These are principally (1) blood, (2) sutures and ligatures, (3) eschar of the thermocautery, (4) air, (5) infection, (6) mechanical, chemical and other agents.

The author considers each one of these agencies and their relative

importance and then draws attention to certain prophylactic measures which at once suggest themselves; as rigid asepsis, avoidance of mechanical, chemical or thermic trauma, careful covering of all denuded surfaces, use of moist hot gauze, avoiding of the exposure of the peritoneum to air. Thus far practically everyone is agreed, but the common experience that the troublesome and dangerous adhesions still quite frequently occur in spite of the strictest possible observance of these measures has led investigators to undertake the most varied and elaborate researches with the hope of discovering some prophylactic or remedial agent that would prove efficacious in all cases. This of course is a vain hope. Nevertheless this work has resulted in the production of many ingenious and valuable procedures, all of which have at one time or another been enthusiastically advocated, and have received varying degrees of support from the profession generally. These heterogeneous devices are grouped as follows:

Non-absorbable protective membranes—as silver foil, solutions of gutta percha, xylol, carbon sulphide, etc.

Manual and postural arrangement of the viscera.

Peristalsis—encouraged by the early post-operative administration of various cathartics, the use of physostymin, systematic massage, etc.

Normal salt solution. Large quantities of physiological salt solution poured into the abdomen at the end of the operation in order to float the loops of bowel into their normal relationship and to keep denuded surfaces separated was at one time extensively used.

Gases. The author noted that Bainbridge has recently advocated distending the abdomen with oxygen gas just prior to complete closure of the peritoneum, as a useful resuscitating and anti-adhesion measure.

Lubricants. These include lanolin, paraffin, olive oil and vaseline.

Non-viable animal membranes—the so-called Cargile membrane, made from the peritoneum of the ox, a similar membrane made from the shark's peritoneum, goldbeaters skin, derived from the outer coats of the caecum of the ox, and a finely woven cloth made of catgut, constitutes the members of this group.

Viable grafts. The author believes that a much more rational procedure is to cover raw surfaces by plastic operations on the peritoneum, or with peritoneal or omental grafts. He corroborates his opinion by experimental work of other investigators and lastly reports a new method of treating denuded bowel surfaces.

This consists briefly in splitting the peritoneal leaves of the mesentery and using one leaf to suture over the denuded surface or where this is impracticable, a plication of the mesentery or a peritoneal envelopment of the bowel with both layers of its mesentery. He states that these peritoneal flaps may be safely extended to include nearly one-half the circumference of the bowel and three to four inches in continuity. There is no apparent reason why it should not be repeated as often as necessary at different levels of the intestinal tract.

In view of the rich vascular anastomosis and the mobility of both the bowel and its mesentery, if care be exercised in placing the sutures so as to avoid the trunk vessels, the effect upon the circulation is negligible.

Stability and permanence of the coaptation is readily secured through intelligent disposition of the sutures.

ALBANY MEDICAL ANNALS

Original Communications

RURAL HYGIENE.

Read before the Medical Society of the County of Dutchess, July 10, 1912.

BY HERBERT D. PEASE, M. D.,

New York.

Mr. President and Members:

The cordial invitation of your President and Secretary developed recollections of former delightful visits with many of the members of this Society and created a pleasant anticipation of this occasion.

Rural hygiene—what does it mean? It should embrace all that relates to the health of those living in the country as distinguished from dwellers in cities,—a very large field of discussion if not forcibly limited.

It will be my plan to discuss first some very general phases of the subject and then to pass to the consideration of some of its more technical branches, leaving untouched a large number of important divisions of diverse characters.

Rural hygiene was of course the first of all hygienes and, as in all other studies of civilization, it is advisable to know the special history of the subject.

It is of interest to note that the first recorded difficulty which occurred on this great world of ours was the very beginning of one of the important branches of hygiene now receiving anew active attention, namely, social or sex hygiene. It is not my intention to trace this subject through the centuries to modern rural conditions. Doubtless now, as then, many of the problems of sex hygiene in rural life are individual in character and depend, to some extent at least, upon moral education and example for their correction.

The next recorded historical controversy between the vegetarian Cain and the carnivorous Abel started us on our way towards Dr. Wiley's modern plan of passing judgment on foods on account of their "consisting in whole or in part of a filthy, putrid, or decomposed animal or vegetable substance." The early sacrificial offerings of the Hebrews were largely instrumental in creating powers of observation as to the good and the bad in foods, for indeed the offerings were to be without blemish and, that being the case, were not the foods to be eaten likewise likely to be selected with equal care? The experiences of the ages in the passing of judgment on foods are now the common knowledge of the rural inhabitant and, even yet, for the purpose of selection of raw sustenance by the country dwellers, these empirically developed methods are but little inferior to the more elaborate and more technically scientific procedures applied in our urban districts. If the urban dweller did not visit his country cousin or defile the latter's domains by excursions into them or by sending to them his refuse and sewage, the country cousin would have but few problems in food hygiene which the accumulation of past experiences handed down to him, would not solve, if he would but apply them.

The one great food problem in rural as well as in urban hygiene, relates to the maintenance of the real and actual food value of our nutrients. Science is beginning to do much in this direction, and it will go far in my opinion. The works of Osborne and Mendel at Yale and of McCollum and his associates at Wisconsin go to show that many of our gladly accepted and eaten foods are either superior or inferior to our present ideas of their food values. When we can find for man the combinations which will do for him what they have found certain foods will do for young pigs, and other animals, then will even rural life be longer and happier. Just to illustrate—McCollum and his associates have shown that neither wheat, oats or barley will fully sustain the normal physiological well being of young pigs when fed exclusively, but corn fed in the same way will. Likewise, they have discovered and outlined some of the essential values of the inorganic elements in the foods of calves which undoubtedly also apply in part, at least, to the sustenance of our own progeny.

But we must leave this, to me fascinating topic of the relative efficiencies of nutritive values of foods to the future, contenting

ourselves with the statement that as the rural dwellers are usually closer to nature, the problem is now less with them than with the inhabitants of cities.

We have already hinted that many rural troubles originate from the wanderings afield of the urban citizen, and this is a great reality. A factor which is somewhat less, but nevertheless almost equals it, is the migration of the country cousin to town and his return. Prof. Theobald Smith has pointed out in one of his masterly descriptions of the big things hygienic in our civilization, that the ever increasing human tendency to associate and to travel, due to the amplification of the social instincts and to the increased complexity of life's problems and the consequent specialization in industrial life, has kept alive unhygienic conditions such as the ancient infectious diseases, and has even developed new difficulties and possibilities for trouble. Without the introduction of new and unaccustomed forms of life, the isolated individual could and might go on developing, by processes of the survival and reproduction of the fittest, a rural race which would be free from most troubles of a hygienic character. However, they might create mental degeneracy and other similar tendencies from in-breeding and these would be due, as experience has shown, to the lack of those very social features for which modern life stands and which we have already spoken of as the chief cause of the defects in our rural sanitation. It is true that rural life is becoming more and more attractive and more highly developed along mental, moral and esthetic lines, and it must meet the physical hygienic disturbances which go with these urban advantages and delights. This it can do in part, without too great an outlay because of the preservation of certain natural advantages, but if rural life desires to approach that stage where their hygiene takes into account the possibilities of trouble, such as those occasional but none the less dire outbreaks of infectious diseases for which rural life is noted, then it must pay a very large price, for isolation with its lack of opportunity for coöperation is an expensive factor to overcome. The rural dweller who so desires to protect himself and to become hygienically "fool proof" must be able to obtain more from the soil he cultivates or to exact increased returns from the consumer of his products in order to meet the large cost of such hygienic insurance. The increased demand for improved rural hygiene comes largely from the protection

the rural dweller must have against the waste products of his city visitors or from his own when he himself has recently been the visitor and has returned with his acquired infection. Thus the progressive modern ruralite must provide the means of proper disposal of all the human wastes and excrements produced upon or near his residence or his growing or stored crops. The most important of all such wastes as are constantly produced are those from the bowels, kidneys and the skin. These constitute the human sewage, and it must be therefore to the disposal of human sewage that we must devote the major portion of our time this afternoon.

Referring again to the ancient Hebrews and their records, we find them mixing the caustic wood ashes from their sacrificial fires and also varying amounts of half oxidized fats containing at least one powerful antiseptic, acrylic aldehyde, with the human feces and burying or depositing the same outside of their camps. When dry, this mixture would neither tend to blow about nor become a breeding place for flies and, when wet, it would be promptly disinfected at least on the surface. The sunlight also would tend to destroy the pathogenic bacteria on the surface of the mass.

The liquid excreta were doubtless allowed to sink into the dry sands of the desert. The tribes of this race were particular about their water supplies and, in fact, they had but few sources and these were always located at a varying distance from their camps or abodes and were not subject to any great danger of infection.

Coming down the centuries, we find only the Romans bringing their water from a considerable distance from their sewage polluted waters nearby. The rural inhabitants of all countries have become accustomed to depend upon varying types and depths of wells for their water supplies, and have been protecting these from sewage pollution more or less uncertainly but, none the less, on the whole, effectively, by disposing of their sewage on or near the surface of the ground. When the well was so located or constructed that the wash from the sewage did not enter at or near the top of the well, a reasonable degree of protection of the water from the sewage was provided, for what did reach the well was of necessity filtered through varying amounts and kinds of soils and was to some degree purified. Now it should not be forgotten that the use of the water from

these wells was at comparatively slow rates, and the underground flow into these wells was therefore sluggish and the rate of filtration through the soil was very slow, and we all know that slow filtration gives high purification efficiency, and it must be admitted that while the hardy *Bacillus coli* can stand a prolonged filtration, the *Bacillus typhosus* has no such prolonged resistance when placed in water.

I have been on the lookout for several years for a well pronounced outbreak—even a small one, or even a few cases of typhoid fever, which I could reasonably attribute to the use of a well water polluted by soil filtration—and have never found it. Thresh, the English bacteriologist, has made the same search, with the same result. Instances of the entrance of typhoid infected sewage through the top of the well or just below it, have been found and cases of typhoid have followed, but penetration through the soil—unless by direct open seams in rocks—has not been found in practice to produce infection to well water consumers. Well waters, on the whole, are reasonably safe, and even when open to criticism the dangers are not great so long as the rural citizen has no infected visitors and he stays at home. He then but drinks his own filth and only renews his own intestinal flora. While, however, our ancestral rural friends protected their water supplies by going deep and by disposing of their sewage near the surface, they ran other risks the consequences of which had not been imparted to them by traditional instructions. They generally failed to follow the example of the beasts, for dogs and cats attempt, and often do cover up their solid discharges. The rural dweller of to-day has rarely made provision for covering up his, and it is not often done effectively. The efficiency of the process is well worth the effort it requires. Deep burial of discharges is unwise if a well be nearby. Moreover, deep vaults are not easily cleaned and bring, in time, large volumes of sewage into a concentrated space. Dilution of sewage by whatever process is, like slow filtration, an effective method of purification. Shallow burial not less than one foot to six inches, not near a well or water course, gives excellent elimination of possibilities for infection for the soil bacteria are here active and it has been shown that they exert a powerful germicidal effect on pathogenic bacteria. Likewise, fly larvae will rarely penetrate over six inches into the ground and pass into the pupal state, while they can readily

burrow that distance and gorge themselves in the filth if this is placed near the surface and afterwards as full fledged flies they can emerge and distribute the filth on human food.

But soil covering of human discharges is certainly a primitive process. It should not, however, be altogether abandoned unless a more modern but entirely effective substitute is provided in the form of a fly-proof, cleanly and practical privy. If the privy building is not fly proof, then it would be advisable to continue the thorough covering of the feces with earth. The layer need not be thick for an actively used privy, for the pupal stage of the fly occupies from four to five days, and any larvae gaining entrance would be liable to extinction through burial during that period, but the adult fly cannot contaminate itself easily and quickly infect food, if all discharges are but covered with wood ashes, sand or earth. However, the real modern fly-proof privies and the fly-proof manure heaps have recently proven their worth for they have eliminated the normal summer typhoid in the more or less rural districts of Jacksonville, Florida, and have greatly benefited the similar sections of Richmond, Virginia.

While it is true that the dwellers in the regions of much vegetation and few people are in no great danger as long as the flies bring into their houses only the normal bacteria of their own intestinal contents and those of their domestic animals, yet, as we have already pointed out, they must forego visitors and visiting, or adopt the modern methods of protection, or suffer the consequences.

One of the great faults of the rural privy has been its location for esthetic reasons. For the sake of the looks of the house and the modesty and convenience of its inmates, the privy has always been located nearer the commissary than any other department of household activity. The fly path from filth to food has always been of the shortest possible length. For the further convenience of the housewife, the inefficiently washed milking apparatus has been air dried in the open as near the kitchen door as possible and, therefore, a few feet nearer for the flies than the food inside the kitchen. If milk apparatus, pails, etc., were really properly washed, air drying, etc., would not be necessary. But ancient deficiencies in hot water systems and an over burden of work for the rural housewives have always led the latter to utilize all that mother nature would do for them without their effort. The thin film of milk left on an improperly

washed can will decompose and cause a bad odor in the can if air drying is not resorted to, but a really clean can can be closed tightly and left so for days and will be odorless. Improved hot water systems and a little practical instruction of the farmer's wife can eliminate this insanitary practice.

It has been shown by Fulton and others, that the incidence of typhoid is relatively higher in the rural than in the urban districts. How much of this can be laid at the door of the poorly washed exposed milk cans outside the kitchens and near the privies of the milk producing regions is a question. Nor is typhoid the only evil. We should not forget the infant mortality of the summer months when we think of the milk pails, the privies and the flies.

The last word then, in my opinion, about privies is that their contents should be effectively quarantined from well water and from flies.

As the rural districts become less rural and more urban, the problems increase tremendously. The tendency to community water supplies and individual family or house cesspools is accelerated. When this stage is actually reached, the system works with reasonable security, provided nature is kind in the quality of the water supply and the soil for subsoil purification of the sewage. However, up to that community stage the sub-rural citizen has troubles due to too little space for both his individual well water supply and his single or double cesspools. The dilution is low and the length of filtration and the fly paths are all too short. He has but few choices; either he must co-operate with his neighbor for a joint and pure water supply and use absolute fly proof privies and make his neighbors do the same, or stop his own and his neighbors' visitors and visiting, or take the consequences. Too often not only he but some innocents suffer the latter.

In the supervision of the labor camps of the contractors on the construction of the new Catskill aqueduct for New York City, I have found the very best results from the complete incineration of the human sewage. This can be effected by various methods, but the only one of the systems adapted for use in a sub-rural district is that providing for a centrally located incinerator to which pans from fly proof pan closets are removed under proper conditions at appropriate intervals. The system would be costly for a small community, although effective. For

individual and isolated houses the small unit system incinerators would prove expensive. Where the houses were not isolated, the odors from any improper burnings would be objectionable. These small incinerators are well adapted for the use of houses or institutions occupied by considerable numbers of people, in which case the expense of operation is proportionately less and the effective and non-odorless burning is rendered easier of attainment.

We have not yet dealt with the garbage and kitchen drainage and disposal problems. The latter is easy with a proper cess-pool soil. There should be a grease trap to collect the fats and debris which float on the surface, but the soluble and suspended matters are easily cared for by most soils and they are no great menace if they are not permitted to become a good medium for fly cultivation. Garbage has been fed to pigs and fowl from time immemorial and is an effective method, provided the pig pens and the poultry yards are properly constructed and maintained. When the unconsumed garbage is allowed to rot and the manure is not removed frequently, flies are bred in large numbers, and then the method is most objectionable. Where it is not desired to feed the garbage to pigs, then incineration is the most practical and, in any event, the safest method of disposal.

Here, again, we revert to the practices of the ancient Hebrews who burned upon the sacrificial altars those parts of their food animals which were most likely to be the seats of infection with animal parasites and bacterial diseases, together with all the offal and entrails. The blood from the slaughter was allowed to run into gutters around the altars where it would be dried by the heat and finally mixed with the ashes from the wood and bones of the animals. Even the fumes from such sacrifices contained, in varying amounts, the products of the partial oxidation of the wood and the fat which, in the case of the former, would be phenol or creosote compounds and, in the latter, the very pungent acrylic aldehydes. These had the properties of excellent fumigants and undoubtedly drove away and destroyed flies and insects in the temple slaughter houses.

But modern incineration of garbage needs but little wood and no fumigants. The so-called Woodruff pit of the U. S. Army is simple, cheap, practically odorless and effective. It consists of a bowl shaped depression in the ground lined on the sides

with loosely constructed stone walls and from the center of which arises a loosely put together stone cone which projects above the level of the ground around the pit. The garbage being dumped into the pit and laid over with a small amount of wood, the fire is kindled in the wood and the garbage is first dried and then catches fire. The central cone acts as the chimney. The slow downward combustion causes no odor and consumes but little fuel. The one precaution necessary is to drain the pit, otherwise a storm will temporarily, at least, destroy its usefulness.

The burning of garbage in cook stoves and furnaces is convenient and effective so far as the garbage is concerned, but not so far as the stoves or furnaces or their effective uses for their original purposes are concerned, for the corrosive action of the burning garbage is pronounced. The garbage should first be dried for such methods of disposal.

For any method other than the feeding of animals the individual small lots of garbage should be wrapped up in paper before placing in the garbage cans or in apparatus for burning. The wrapping makes for clean, easily emptied cans, especially in freezing weather, and for quick and effective incineration.

The disposal of garbage thus prepared at intervals of not over five days will materially assist in keeping down fly breeding and this latter is, as we have seen, most desirable.

In discussing the fly problem as a whole it would be well to admit at the outset that complete elimination of the pest from the strictly rural districts is impracticable. It is entirely probable, however, that their exclusion from feeding upon dangerous materials and then invading dwelling houses can be accomplished. We have considered the methods of quarantining them from human sewage. Their exclusion from the household can be best brought about by applying some biological principle to the solution of the problem. Hodge of Clark University claims much for the method of trapping the garbage can with a fly trap in the cover. Ingress to the can is made easy for the flies, as is likewise egress into the wire beehive trap set in the cover. The garbage is the inducement to enter and as it is not only an appetizing food and drink, but most instinctively suitable for a nesting place for the female house fly, it has its triple attraction for the whole species. Hodge supplements his trapped cans with window fly traps which depend for their efficiency upon the

well known propensity for flies to walk up a vertical surface rather than down. They will walk into any trap located at the top of a path or on the window and Hodge's device catches them both going in or coming out of windows of all kinds, not only on houses but on manure boxes, pig houses, chicken coops, etc. Screening for fly exclusion is but a poor second in the methods of protection. Their use is but a confession of weakness in our biological methods of prevention of breeding and extermination.

The problems involved in the prevention of the spread of communicable diseases in rural districts are easily grouped into two classes. First they are largely matters of personal hygiene and secondly of school sanitation. Even the latter class is to a considerable degree a matter of personal hygiene and is subject to the same discussion as the general problem of personal hygiene.

With the advent of a case of a communicable infectious disease from without, the control would be easy could perfect personal hygienic conditions be instituted in the household. This, however, is most difficult of attainment in many, if not most instances and even when nurses are available for constant supervision they are not often of the fully trained and experienced variety.

Thus the attending physician is expected to be not only the experienced medical attendant but must be the trained instructor in the broad field of personal hygiene. Too much is expected of him. His city confrere has much of this burden removed by the health department and its staff and by all the conveniences of city life. Given a very intelligent rural housemother and a physician with natural ability as a teacher of science along popular lines and the rural results will equal if not surpass those obtained in cities. However, it is with the less favorable conditions that most men have to deal.

Where does the burden of such work belong? By precedent and by right it belongs on society as a whole. Unless the individual affected desires to assume it and can demonstrate his ability to solve the problems, they should be solved by proper official activities. What these should be and how they should be applied may depend in part upon local conditions, but there is no question whatever that a great defect exists in the utter failure of the state to formulate and press forward a constructive plan for the correction of the main difficulty.

The policy of the utmost of home rule under but little state supervision is well established in this state, and this inheritance must be taken into consideration in the formulation of any plan; but the state can and does provide for reasonable uniformity of local activities in the various sections in most departments of civilized life and it has always retained the power of investigation and exposure and even the assumption of the burdens of operations where gross local deficiencies are found. It can do the same for sanitation.

A modern beginning was made in this state with the creation of the right to establish county hygienic laboratories. Whether the new plan of having state employed and paid district health officers, scanty provision for whom was made by the last legislature, is the beginning of a proper plan for this state, is questionable. The doubt is due to the fact that a future legislature may reverse the policy to one more in harmony with the inherited cry of home rule. The employment and payment by the district of a competent officer selected in accordance with the present rules for obtaining the services of public officers with the added selective power and supervision of these officials by the State Department of Health would, in my opinion, be more in harmony with the precedents in this state and would make for greater progress and permanency of results.

The district established should also be required to support, in addition to the trained health officer, one or more thoroughly trained and experienced nurses for cases of infectious diseases and it goes without saying that the health district so established should have available the rapid service of a county or other hygienic laboratory. District hospitals for contagious diseases would come ultimately and a close connection should be established by the district health officials with the county or other local tuberculosis hospitals as well as with the state sanatoria.

Signs are not wanting that the direct control of health conditions may pass from the hands of the medical profession. It has almost done so in some communities, notably New Jersey, where the majority of health officers are not physicians, or even sufficiently medically trained in all instances, but they are doing good work despite these defects and the non-medical institutions which trained most of these men are pointing to the results with not only pride but with a dare to the medical profession to do as well.

Personally I believe that sanitation should be directed by men with a broad medical training, but the profession must wake up or it will lose its time honored and appropriate control of the whole sanitary situation.

THE SALICYLATES IN THE TREATMENT OF ACUTE CHOREA, WITH REPORTS OF CASES.

Read before the Medical Society of the County of Albany, May 28, 1912.

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I. Definition: The term chorea as now used is really a generic one. Choreaform affections are legion in number, and in order to fully comprehend the nature of Sydenham's disease it will be necessary to briefly describe a few of the maladies to which the appellation chorea is sometimes given. Acute chorea, also known as infectious chorea, chorea minor, Sydenham's chorea, St. Vitus or St. Anthony's dance is an acute disease, usually of childhood, characterized by irregular involuntary contractions of any, and sometimes a large number of the skeletal muscles and often accompanied by more or less psychic derangements. The so-called "grave chorea" is simply a very severe and often fatal form of this disease. In this form the muscular jactitations are so violent that the patients have to be restrained or carefully guarded that they do not injure themselves. Speech is difficult at an early stage and later often becomes impossible. This is due in part to the extreme choreic movements of the lips, tongue and muscles engaged in the mechanism of speech, also to the accompanying mental change which may vary from mild stupor and apathy to a condition of active delirium. Sachs says that chorea insaniens belongs to this type.

Acute chorea is at times confounded with some of the following conditions, which we will briefly describe: *Athetosis* is a symptom complex closely allied to chorea and symptomatically consists of frequent worm-like movements usually confined to the fingers and toes, but sometimes including the facial muscles. On analysis the movements are seen to consist of a uniform, continuous and slow flexion, extension, adduction and abduction of the fingers and toes; these movements not being produced

simultaneously in all of the members affected but each performs a motion independently. Choreic movements chiefly differ from those of athetosis by their lightning-like rapidity.

Chronic progressive chorea as first described by Huntington is a disease hereditary in nature, often affecting many members of a family. Its chief characteristics are choreiform movements which commence insidiously and are not very pronounced. When well established, the movements are slow, irregular and incoordinate, rather than sharp and quick as in acute chorea. Mental weakness appears early, but progresses very slowly, ending frequently in idiocy.

Paramyoclonus multiplex of Friedreich is characterized by clonic contractions in various groups of muscles. It develops in early adult life, and heredity seems to play an important role in its etiology. The muscular contractions are lightning-like and occur chiefly in the extremities and trunk.

Chorea gravidarum, which, as its name implies, occurs in the pregnant state, is an acute process symptomatically similar to acute chorea and as Jolly and Strauss think, is probably due to some form of auto-intoxication.

Hemiplegic chorea is dependent upon organic changes in the cerebrum. This in itself, is of course not a distinct disease but merely consists of choreic movements of greater or less intensity and occurs usually as a forerunner or premonition of an apoplectiform seizure of one or more members of the body. It disappears after the paralysis is established.

Morvan's fibrillary chorea consists of irregular contractions of bands of muscular fibres giving rise to slight irregular tremors which disappear on voluntary movement. It usually appears first in the gluteal muscles and may extend to those of the trunk and upper extremity. According to Morvan there is a pathologic lesion in the motor cells of the anterior horn of the spinal cord.

Convulsive tic is the name applied to a certain group of disturbances which closely resemble chorea. They are evidenced by a complexity of movements which become conspicuous by their rapidity and oftentimes, severity. The condition often commences in the orbicularis palpebrarum; the first movement being a winking which is often accompanied by convulsive contractions of the muscles of the face, causing the patient to exhibit various grimaces. At times, other portions of the body may be

involved and the patient compelled to repeat many times apparently purposeful movements.

Habit spasm or reflex chorea is a semi-incoordinate movement of some portion of the body. It occurs with great frequency in the young from 7 to 14 years of age and is usually due to refractive errors, nasal obstructions, adenoid growths in the nasopharynx, phymosis, delayed menses, decayed teeth, masturbation, and an attack may often be precipitated as Sachs has pointed out, by animal parasites in the intestinal tract.

2. *Etiology and pathology:* Up to within recent years there seems to have been as many theories pertaining to the etiology of acute chorea as there are writers on the subject. Formerly the neurotic theory seems to have had a host of adherents. This is based upon the appearance of the disease during the years of active growth, the common neurotic peculiarities and antecedents of the patients and the complexity of mental disorders which embrace motor reflex and sensory troubles.

The infrequent occurrence of death in chorea minor has given but little opportunity of studying the underlying pathological changes. Nevertheless the literature presents a large number of choreic cases having died of complicating diseases and in these there have been so many different post mortem findings that almost each author may be said to have his own peculiar view of the pathology of the disease. Anything from a cerebral anaemia to a tumor in any part of the brain has at one time or another been held to be the morbid basis of the condition.

Forester considers chorea to be a lesion in the brain, particularly of the cerebellum and of the superior peduncles succeeding which the cerebrum is involved; the cerebellum serving of course as the coordination point of the various muscle groups. This likewise is the view of Gowers and Bonhoeffer. The embolic theory has many advocates, chief among them being Hughlings Jackson, Siegert and Henoch. This has been brought forward because of the cases in which endocardial proliferations and thrombotic deposits have been found post-mortem upon the heart valves. A direct proof of the relation between chorea and capillary embolism was given in 1885 by Money, who by injecting a fluid into the carotids of animals produced movements closely resembling those of chorea and this condition was associated with capillary embolism of the brain and cord.

Dickinson found that hyperaemia of the brain and cord and

numerous hemorrhages into those regions of the brain supplied by the middle cerebral artery constituted the most frequent pathologic substrata of the disease. This investigator moreover also found numerous emboli in the smaller vessels of the cortex.

Sachs reports the result of a post-mortem examination of a case of grave chorea resulting in death from endo- and myocarditis. Section of postcentral and precentral cerebral convolutions showed degenerative changes in the ganglion cells like those described following upon acute toxic conditions.

3. The relation of acute chorea to rheumatism: The theory of the rheumatic basis of chorea is by no means a new one, but until recent years it seems to have been lost sight of. As early as 1850 Batell claimed that all cases of chorea were rheumatic in origin. During the last decade and one-half the advocates of the theory of the casual relation between the two diseases have been many. We shall mention a few of them with the premises they advance for proving their conclusion. Some writers have found evidences of rheumatism in not more than 5 or 10 per cent of choreic cases, while the statistics of others place the figures as high as 50 or 60 per cent. Naturally there is a question as to what constitutes a rheumatic taint in a child. What one author considers conclusive evidence of rheumatism another will question. If we draw the line sharply and say that only cases of acute articular inflammation shall be called rheumatic, then the number will of necessity be very small. If subacute cases with joint swellings are included the proportion will be considerably larger. While if we admit cases of acute endocarditis without articular symptoms and those of joint stiffness without swelling, the percentage will be very greatly increased.

From an analysis of 300 cases of acute chorea Fraser finds that 53 per cent of his series showed definite evidence of rheumatism either previously to or concurrent with the attack of chorea; 72 per cent had either a personal or strong family history of rheumatism. In a large number there was a history of nervous diseases in other members of the family. In comparing the age incidence, Fraser, agreeing with Guthrie's figures, found a marked increase in chorea between six to twelve years, and in acute rheumatism between seven to twelve years. The seasonal incidence, agreeing with Gabbet, showed the maximum of chorea one month later than rheumatism. According to

Batten, 25 per cent of 115 chorea patients treated at the time, without signs of rheumatism, developed it within six years. Hence, Fraser believes that the majority of choreas are closely associated with rheumatism, and that possibly all cases of true chorea are rheumatic in origin, with chorea a cerebral manifestation.

Kerley gives us some interesting statistics. A trifle over 50 per cent of his choreics either presented a history of having exhibited rheumatic manifestations or showed evidence of it when first seen. Furthermore in 80 per cent there was some association with rheumatism either in rheumatic parents, or in the actual manifestations of rheumatism at some time in the patient's life. So impressed is Kerley with these facts and by similarity of the clinical signs of these supposedly distinct diseases that he believes them due to the same toxic agent. This he says is further proved by the results of treatment, for by treating every case of chorea as though it were rheumatism his results have been strikingly better. Of 746 cases collected from various sources Fellman found no less than 245 or 32 per cent which showed the presence of endocarditis.

Duckworth's statistics show a family or personal history of rheumatism 85 per cent of choreiform cases. He believes that a larger percentage would give a rheumatic history if accurate facts could be obtained, and says that chorea may be the sole manifestation of rheumatism.

Holt finds that 56 per cent of his cases are rheumatoid in origin.

Osler in the 73 cases with autopsy, collected by him found cardiac lesions recorded in over 90 per cent; consisting of recent endocarditis 62 cases, with pericarditis 19 cases and pericarditis alone in two cases. He believes that there is a very close relation between chorea and the rheumatic diathesis as evidenced by the symptoms alone. Furthermore he says, "on careful scrutiny the number of cases of chorea in which unmistakable evidence of this diathesis is found is very large, including in my observation over one-half. There seems to me to be a large group which may be classed distinctly as rheumatic chorea."

Crandall has analyzed 146 cases of chorea treated by him at the New York Polyclinic and elsewhere, with the following results; of 111 cases in which the question of rheumatism was

investigated there was a definite history of it in 63; in 41 rheumatism occurred before the chorea; in 13 the first evidence of articular disease was coincident with the choreiform manifestations and in nine it occurred subsequently to the chorea as well as before it. In other words previous rheumatism was evident in 37 per cent, concurrent rheumatism in 24 per cent and subsequent rheumatism in 15 per cent of the cases. The author states that many of these patients have been under observation for several years and it has been very interesting as time passes to note how the evidence of the rheumatic features have multiplied, the longer the cases have remained under observation. In these cases only articular symptoms have been accepted as evidence of rheumatism. If those of endocarditis without articular pain were included, as Crandall thinks they might fairly be, it would raise the proportion of course of the rheumatic cases still higher.

F. J. Poynton in his latest communication gives some very interesting figures from a series of 500 consecutive cases of rheumatism. In his analysis this author has included 217 which came to him with acute chorea as one or the only symptom, thus assuming them rheumatic and then critically examining the evidence he possessed for making such an assumption. Of the 217, heart lesions, and in many cases other rheumatic symptoms were obvious in 122. Twenty-eight more were suffering from arthritis and pains, in 22 others there were physical signs of cardiac dilatation as the only evidence of a rheumatic state. Of the 45 remaining, 36 either developed rheumatic cardiac disease at a later date or came from a family having a more or less rheumatic predisposition. Poynton concluded that his record of cases supports what many authors have long maintained, that the great cause of chorea is rheumatism and even reduces the question of fright and brain strain to the position of being interpreted as the active factor in producing the actually developed disease in tissues already unstable with rheumatism.

Hirt presents the proposition in a somewhat different manner. He thinks that there is a common toxic agent which, if it affects the cerebral cortex will produce choreiform movements, while if its action on the other hand is on the joint structures, the manifestations of acute articular rheumatism will present themselves.

Hebner gives the following reasons for believing chorea to

be rheumatic in origin; "The rheumatic exanthemata observed in some cases, the tendency of both diseases to a protracted course and recurrence, and the frequency of endocarditis present in rheumatism and chorea regardless of the severity of the disease."

Fisher found that 80 per cent of choreics had enlarged tonsils and gave a history of previous attacks of tonsilitis.

There is yet another link to add to the chain of evidence of the causal relation of these diseases. The thyroid gland sometimes enlarges in chorea, the writer having seen it in two of the cases which he reports. Clemens has frequently noticed the enlargement of this gland in the rheumatic diseases of childhood, and now claims for it a place as a sign of rheumatism in the rheumatic in the rheumatic series. In Clemens' experience the time when the thyroid enlargement was first noticed varied. In some cases it preceded all other manifest signs of rheumatism. Again it has appeared as the fourth, or fifth, link in the rheumatic chain, and at other times it has been found to persist in association with chronic endocarditis after all other rheumatic manifestations have disappeared.

4. *Bacteriological:* While it is not the purpose of this communication to dwell at length upon the bacteriological findings in acute rheumatism, *per se*, nevertheless chorea being so closely allied to this disease it would appear to be pardonable digression if we should summarize the findings up to the present time.

Numerous investigations have been carried out in an endeavor to determine if possible the infective agent and a large number of different organisms have been described by bacteriologists as the specific cause of rheumatoid disease.

Poynton and Payne following the footsteps of Triboulet and Wasserman, in 1900, in eight cases of acute articular rheumatism isolated a diplococcus; in 1901 they found this organism altogether in 32 cases of various rheumatic lesions.

Beaton and Ainley Walker in 1903 confirmed the results of Poynton and Payne, isolating their "Diplococcus Rheumaticus" in 15 cases, including eight of acute articular rheumatism endocarditis. These workers conclude that this organism is constantly associated with acute rheumatic lesions; that it can be cultivated on artificial media outside the human body; and that on inoculation into animals it gives rise to the characteristic lesions of the disease and can again be isolated from those lesions.

Beattie's results (1904) have been absolutely confirmatory of the above. By intravenous injection in animals he produced endocarditis, polyarthritis and chorea, and concluded that the "micrococcus rheumaticus" is a special organism and is causal in acute rheumatism.

As in the case of rheumatic fever, the belief in the infectious nature of the preponderance of choreic cases has been steadily increasing. So long ago as 1872 Pianese claimed to have isolated a diplococcus and a diplobacillus from the cervical cord and the cerebellum of a patient who had died of St. Vitus' dance, and by inoculating cultures of these micro-organisms in animals he claims to have produced chorea in them. In 1894 Dana wrote a paper on the "Microbic Origin of Chorea." The patient who died at the age of 34 had his first attack at 14 and had repeated attacks following. Diplococci was found in the proliferating tissue between the meninges and the brain.

Westphal, Wasserman and Malkoff in 1899, in a 19-year-old girl, who died as the result of endocarditis and nephritis associated with chorea, found diplococci and streptococci in the blood, brain, and heart valves. Inoculation with these organisms produced joint affections in rabbits.

Lewis and Longcope isolated the "Diplococcus Rheumaticus" 12 hours after death from the median basilic vein of a choreic dying of endocarditis. Beaton and Walker found it in the heart's blood post-mortem in two cases and in the urine in one case. Poynton injected the diplococcus into a rabbit and observed in the latter choreiform symptoms. That chorea is of the same bacterial origin as rheumatic fever has been tabulated by Poynton as follows:

"1. That micro-organisms of the same streptococcal group have been isolated in rheumatism.

"2. The same micro-organisms have been found in the cerebro-spinal fluid, pia matter and in the brain itself in chorea.

"3. Involuntary movements of a choreiform type have been observed by Payne, Meyer and Poynton as the result of the intravenous injection of rabbits with such micro-organisms.

"4. Identical bacteria are found in other rheumatic lesions in man, which are capable of producing rheumatism in animals."

Sington has recovered the germ from the cerebro-spinal fluid of a choreic.

Morphologically this organism is a small micrococcus which occurs in tissues and cultures in pairs or short chains. In size it is smaller than the ordinary streptococcus and has no demonstrable capsule. It stains readily with the aniline dyes and is gram positive. While it belongs to the streptococcal group there are a number of characteristics, cultural and otherwise, wherein it differs from the streptococcus pyogenes.

In view of this evidence it would seem to be a conservative statement to say that we are justified in looking at the majority of cases of chorea as infectious processes, or in the words of Heubner "rheumatic equivalents."

5. Drugs recommended as therapeutic measures: It is a well recognized fact in medical lore that the curability of any disease bears an inverse ratio to the number of therapeutic means advocated for its treatment. Myriads of drugs have been recommended for tuberculosis while quinine stands alone as the sovereign specific remedy for malaria. About 60 drugs all told, at various times have been proposed for the treatment of chorea. We will discuss only two; arsenic and the salicylates.

Arsenic: For decades arsenic, usually in the form of Fowler's solution, according to a large number of authors, has been the remedy recommended as par excellence in the treatment of chorea, but of late there have been a number who have gone on record as not being entirely satisfied with, or opposed to this drug, either on account of its high toxicity or because it is far from being a specific curative agent for the disease in question. According to the method in vogue of giving arsenic in gradually ascending doses it has been assumed that a progressive immunity to the drug occurred, the nature of which has always been obscure. Cloetta has shown by means of a series of experiments on dogs that this immunity is only apparent, not real. In one dog which at first was very sensitive to arsenic, he was able, in the course of two years, to increase the tolerance to such a degree that 38 grains of arsenious acid were taken daily without disturbance. It appeared, however that this apparent tolerance was due entirely to a steadily increasing impermeability to arsenic of the gastro-intestinal mucous membrane. While the large dose just mentioned was administered all but 0.13 per cent of the arsenic passed through with the stool, so that the dog absorbed only a little over one-twentieth grain daily. When this animal was

given one-sixtieth of the daily dose hypodermically he promptly died of acute arsenical poisoning.

An objection to the use of arsenical preparations in chorea has been taken in many quarters. Burnet in discussing the treatment vigorously attacks arsenic as a remedy for this disease. He sums up his objections to it as follows: "(1) Large doses have to be given and this may induce neuritis, (2) the results achieved are rarely permanent, (3) arsenic exercises no influence over the complications and sequelae of chorea, and (4) it does not benefit in any way the rheumatic constitution of the patient." He believes that the so-called cure by arsenic is brought about by poisoning and probably paralyzing the central nervous system. Koplik attacks this drug on the ground that it is dangerous because of its irritating effects on the kidneys. Allan thinks the reaction against its employment is due to the fact that it was given by many simply because it had a reputation of being the drug to cure chorea, and no scientific reason was forthcoming. Swift by following the arsenical plan of treatment says that he has caused three cases of hemorrhage from the stomach, several of renal hemorrhage, and many of severe irritation, if not inflammation of the conjunctiva. Cabot likewise is not favorably impressed with its value and says he has rarely been sure of any benefit from arsenic in the diseases usually treated with it.

The salicylates; the treatment of chorea as a rheumatic manifestation. While the arsenical treatment of this condition has been losing adherents during the last few years, those advocating the use of salicylic acid and its derivatives have been steadily increasing in number. Holt reports a case in which arsenic had been continued for two weeks without the slightest improvement, when the patient had an intercurrent attack of subacute rheumatism for which sodium salicylate was given in full doses with the effect of controlling the choreic symptoms promptly and permanently. Gordan Sharp before the Royal Medical Society of London recommended the use of the salicylates highly, and said that he had never found that depression resulted from their action. Poynton and Ness of England are likewise enthusiastic advocates of this form of treatment. Kerley not only gives his cases salicylates but also places them on an anti-rheumatic diet. With the salicylates he combines arsenic as tonic to the nervous system and thinks that this method is ideal. D. B.

Lees of London advises enormous doses of the salicylate of sodium, 200 grains or more per diem combined with soda bicarbonate. John Allan of Scotland during the last three or four years has relied on acetyl-salicylic acid (aspirin) and has come to regard it as the drug without equal for the treatment of acute chorea. He has used it with very satisfactory results in practically all of his cases. This remedy he continues, is pleasant to take, positively free from unpleasant symptoms and reliable in its results. Its use in chorea is based on scientific grounds, because it is anti-rheumatic and its properties are analgesic, sedative and also hypnotic.

There is one adjunct to the medicinal treatment of this disease; if not made use of, all, therapy will practically be of no avail. I refer to rest. The first thought in the treatment of choreic children is rest; in bed if necessary. Without this the use of drugs will be futile.

REPORTS OF CASES.

CASE I. D. C., patient of Dr. O. D. Ball, female, aged 16 years. Had measles and pertussis in infancy; when seven years old she was taken with an acute nephritis followed by a number of apparent uraemic seizures. Two years later she had an attack of malarial fever lasting two weeks.

October 28, 1909, patient was taken with severe arthritic pains in ankles, knees and shoulders, accompanied by a marked febrile reaction. When seen several days later the joints mentioned were found tender and swollen. The heart's action was normal, while the urine showed a number of hyaline and granular casts. Patient was given anti-rheumatic treatment, to which she reacted quickly, and in two weeks' time was quite free from joint tenderness and fever. Convalescence continued uneventfully until November 20, when she began to present muscular twitching, which, by the 22d, had become very marked; the muscles of the face, arms and leg being affected. The cardiac action was very tumultuous, pulse averaging from 120 to 130. Sodium salicylate was now administered gr. x every three hours. Her choreiform jactitations continued until about January 1, when they began to subside to a slight extent, but the patient now entered into a condition of grave rheumatic toxemia as evidenced by delirium, a higher febrile reaction (102-103) and a pulse rate as fast as 160. The salicylate was now discontinued and aspirin gr. x every three hours substituted. Auscultation of the heart indicated this time a pronounced mitral presystolic murmur. January 20 she was placed upon small doses of digitalis and sodium iodide, the aspirin being continued. By February 1 all choreiform manifestations had disappeared. The pulse rate was down to 80 and regular. On later examination her mitral stenosis persists, otherwise she seems to be suffering no ill effects of her severe prostration.

CASE II. M. C., patient of Dr. O. D. Ball, aged 9, female. Child's mother says she had rheumatism, followed by chorea, when she was patient's age. About a month before the child was seen she had a mild attack of rheumatic arthritis in left hand and right ankle. Following this by about two weeks the patient began to have considerable difficulty with the muscles of phonation which gave rise to a peculiar stuttering speech. When examined December 30, 1910, she presented well-marked evidence of mitral regurgitation and aortic stenosis with a pulse rate of 120. The tonsils were hypertrophied. Her fingers exhibited slight twitching and the right shoulder was occasionally drawn up involuntarily. She presented marked enlargement of both lobes of the thyroid. At this time she was given aspirin gr. v every three hours and in addition moderate doses of syrup of the iodide of iron. Instructions were given to keep the patient in bed three hours each day.

She was again seen January 9, 1911, showing marked general improvement. Her vocal faculties being normal and only slight choreic movements persisting in the fingers. Ten days later all choreiform manifestations had disappeared.

Patient was subsequently seen two months later for ruptured cardiac compensation, which yielded to digitalis and nitrites. There has been no return of the chorea.

CASE III. J. G., patient of Dr. O. D. Ball, male, 13 years old, lives in a locality continually damp. Has three sisters and two brothers alive and well. He is subject to tonsilitis, having had two or three attacks each successive winter for the past five or six years. He has been free from the ordinary diseases of childhood. May 27, 1911, he was confined to bed as the result of an attack of rheumatic fever affecting the knees, ankles and wrists. About one month later he began to present muscular jactitations of arms and head, accompanied by great restlessness especially at night, often crying out in sleep from no assignable cause. When first seen July 1, 1911, patient exhibited marked choreic movements of shoulders, neck and hands and a peculiar stumbling gait. The cardiac action was tumultuous but there was no other evidence of endocardial inflammation. He was given sodium salicylate gr. x. every four hours and told to remain in bed from two to three hours each day. Six weeks after being seen there was a considerable improvement in the choreic manifestations but the heart remained quite tumultuous, to combat which, he was given digitalis. When examined December 1, 1911, there was no evidence of chorea and the heart was negative except for a slight roughening of the first sound at the apex. He had gained twenty pounds since first seen, and remains a healthy, vigorous, growing boy.

CASE IV. Patient referred by Dr. G. E. Griffin; M. A., female, aged 5. Had varicella when three years old. From December 5 to 25, 1910, patient had an attack of acute articular rheumatism involving especially the arthritic structures of the legs. Two weeks following the remission of the joint pains and fever, choreic twitchings of arms, legs and head developed and patient was able to articulate only with the greatest difficulty. When examined January 20, 1911, she presented the aforesaid

jactitations and a very unsteady gait. Tonsils were large and soft. The heart action, aside from being rapid, was apparently normal. She was told to remain in bed six hours each day and given eight grains of salicylate of soda every four hours. When seen at the expiration of two weeks the patient was markedly improved, and at the end of four cured. To date the malady has not returned.

CASE V. M. C., a school girl, aged 12, entered St. Peter's Hospital August 5, 1910, on the medical service of Dr. T. L. Carroll, complaining of marked muscular twitching of arms and legs. Her paternal grandparents were subject to articular rheumatism, as has been her mother. In childhood she has had measles, whooping-cough and diphtheria; and since 1910 repeated attacks of tonsilitis. She has never complained of rheumatism. About July 15, 1910, she began to have twitching of hands; this soon extended to the face and lower extremities and finally became so severe that she was forced to enter the hospital for relief. On examination she was found to be a well-nourished child. Heart sounds were faint and distant, but no distinct murmurs were audible. The area of cardiac dullness was slightly increased to the left. Patient was put to bed and given aspirin gr. x every three hours and the bowels kept active with salines. She made an uneventful recovery and in a month's time she was entirely cured of her chorea. She was again seen January 23, 1911, in St. Peter's Hospital Dispensary complaining of rheumatic pains in the shoulders and knees but no choreic manifestations; at this time the cardiac rhythm gave evidence of irritation but no extraneous endocardial sounds could be elicited by auscultation. She was now given ten grains of sodium salicylate, well diluted, after each meal. In two weeks' time the rheumatism had disappeared. August 1, 1911, she had a recurrent attack of her chorea which readily reacted to treatment. When examined April 30, 1912, she was in perfect health, heart action was negative except for a slight tachycardia and a moderate accentuation of the second pulmonic sound.

CASE VI. J. H., a 14-year-old school boy, presented himself at St. Peter's Hospital Dispensary, medical department, July 13, 1911, complaining of muscular twitching. His family history was negative. Has had the ordinary diseases of childhood. For the past month he has complained of choreic jactitations of the right arm and forearm and a nervous twitching of the posterior cervical muscles. Two weeks after the onset of the chorea he was annoyed with severe rheumatic arthritic pains in both knees and ankles. On examination he presented the usual choreiform movements of his right arm and head. No rheumatic nodules were palpable. Pulse was 100 and the heart sounds were negative except for a slight roughening of the first sound at the apex. He was given a prescription containing ten grains of sodium salicylate to be taken every three hours. A week later he was seen with no improvement. Being sent home with a refilled bottle, he was given strict orders to remain in bed three hours each day. In six weeks' time, as a result of this therapy, he was completely cured and remains well.

CASE VII. A. K., aged 7, male, a patient at St. Peter's Hospital Med-

ical Dispensary, October 5, 1910, service of Dr. J. P. O'Brien, gave the following history: His grandfather was subject to inflammatory rheumatism; father and mother alive and well. He has three brothers and two sisters who are all healthy, with the exception of one of the latter who has the residual paralysis of an acute polyomyelitis of infancy. He had measles in 1909 but has never complained of any rheumatoid manifestations. He sleeps well, his appetite is poor and bowels fair. For the past five weeks he has been troubled with twitching of hands and facial muscles, especially orbicularis oris and palpebral. On examination the cardiac area is larger in the transverse dimension than normal, its action is slightly irregular and tumultuous but no murmurs are apparent. The following mixture was prescribed:

R Sod. salicylat 5*iv*
Fl. Ext. cascara 5*i*
Elix. simplic. q. s. ad. 5*iv*
M. Sig. 5*i*, three times daily.

When seen three weeks later the twitching had entirely left his hands but still persisted to a slight extent in his shoulders. Ten days later there was an entire absence of all choreiform manifestations. A later examination revealed an enlarged heart with a mitral systolic murmur transmitted toward the axilla, an accentuated second pulmonic sound and a slightly irregular cardiac rhythm.

CASE VIII. Miss H. F., aged 6 years, patient of Dr. O. D. Ball, presented herself December 28, 1909, at which time she complained of choreic movements of arms, legs and neck. She had diphtheria two years previous, otherwise she has always been a healthy child. On examination she presents enlarged tonsils and a rapid, irregular heart. Beginning about December 20, patient's mother noticed that she began to have lightning-like twitching contractions of the right forearm. These soon spread to the upper arm, neck and involved the thighs also. They finally became so severe that for a time she had an entire inability to use the right arm. She was directed to take sodium salicylate, six grains every four hours. The mother said that she noticed an almost immediate change for the better. This medication was continued for four weeks, at the end of which time her choreiform movements ceased entirely. She remained well for eleven months, when she had another choreic attack not as severe as the first, but accompanied by rheumatic pains in the right wrist and shoulder. She was given sodium salicylate as before and in addition two grains of aspirin every four hours. Her rheumatism and chorea disappeared under this therapy in three weeks. She was examined April 30, 1912, appeared in good health, but showed a well-marked mitral insufficiency.

CASE IX. Miss I. V., aged 10 years, a patient of Dr. O. D. Ball, when seen March 16, 1912, complained of jactitations of right shoulder and twitching of eyelids and forehead. She had measles and pertussis when a child, and for the past two or three years has had several attacks of acute tonsilitis annually. As far as her mother knows the child has never been subject to articular rheumatism. On physical examination the heart action

is very tumultuous and irregular, pulse 120. The tonsillar tissue is ragged and hypertrophied. Both lobes of the thyroid are enlarged causing a marked anterior protuberance when the neck is viewed from the lateral aspect. She was given ten grains of sodium salicylate every four hours and ordered to rest in bed a considerable part of each day. She was seen April 2, when the cardiac rhythm was much less tumultuous and her chorea improved. She was last seen April 15 and was improving slowly. The thyroid enlargement had decreased markedly and the pulse rate was down to 80 per minute.

I will not presume to draw any statistics from such a small series of cases, but merely point to a few of the salient points. Of the nine cases recorded, seven were definitely rheumatic, while two presented heart conditions usually seen in acute rheumatism,—to be explicit, four cases were anteceded by articular rheumatic disease, in three it developed subsequently to the chorea. Of the remaining two, one showed a tumultuous irregular cardiac action, while the other later developed mitral insufficiency. Two cases exhibited a bilateral thyroid hypertrophy. Cases 1, 2, 7, and 8 presented a well marked acute endocarditis, while in three others there was suspicion of a beginning endocardial inflammation. The tonsils were diseased in six cases, showing a possible portal of entry. The average duration of the disease in this series not including case 1, which really developed into one of grave chorea, was four and one-half weeks.

CONCLUSIONS.

- (1) The relation of chorea to rheumatism is a very intimate one.
 - (2) Enlargement of the thyroid, as pointed out by Clemens, should be considered as another link in the chain of rheumatic manifestations.
 - (3) The salicylates are practically specific in acute rheumatism—it would seem that we can conservatively say that they are at least useful, in the majority of choreic cases.
 - (4) While chorea is said by many to be a self-limited disease, the writer claims that salicylic acid shortens its course, and renders the ravages of the frequently accompanying endocarditis less severe.
- My thanks are due to Drs. T. L. Carroll, J. P. O'Brien and G. E. Griffin for the use of clinical material and for the many kind suggestions of Dr. O. D. Ball without whose keen and inspiring interest this work would have been impossible.

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"There are different kinds of sickness. There is sickness of the body, and sickness of the heart, and sickness of the spirit;—and then there is sickness of the mind, the worst of all."—*Anthony Trollope*.

ALBANY HOSPITAL.

TENTH REPORT OF PAVILION F, DEPARTMENT FOR MENTAL DISEASES, FOR THE YEAR ENDING SEPTEMBER 30, 1912.

BY J. MONTGOMERY MOSHER, M. D.,
Attending Specialist in Mental Diseases.

To the Board of Governors:

I have the honor to present the tenth report of the operations of Pavilion F, for the year ending September 30, 1912.

There remained in the Pavilion on October 1, 1911, eighteen

patients—eight men and ten women. There have been admitted one hundred and ninety men and one hundred and fourteen women. The whole number of patients under treatment was, therefore, three hundred and twenty-two.

There have been discharged three hundred patients—one hundred and ninety-one men and one hundred and nine women, and there remained in the Pavilion at the end of the year, seven men and fifteen women.

The following tables show the forms of disease and the results of treatment for the year, and since the opening of the Pavilion:

TABLE I.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT FOR THE YEAR ENDING SEPTEMBER 30, 1912.

FORM OF DISEASE.	Recov- ered		Im- proved		Unim- proved		Died		Remain- ing		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium.....	6	12	2	3	1	3	...	...	1	9	19	28	
Confusional insanity	2	...	9	7	4	9	...	1	...	3	15	20	35
Melancholia.....	1	1	5	11	5	6	...	1	...	4	11	23	34
Mania.....	1	...	1	1	6	1	...	...	...	8	2	10	
Primary dementia.....	2	6	3	7	2	...	...	1	...	14	7	21	
Recurrent insanity.....	1	...	...	3	3	3	...	...	...	4	6	10	
Chr. delus. insanity.....	...	1	8	5	...	...	...	...	...	8	6	14	
General paralysis.....	...	...	7	...	1	...	...	...	1	8	1	9	
Terminal dementia.....	...	2	4	12	3	3	2	1	2	18	11	29	
Idiocy and imbecility.....	...	1	4	4	...	...	...	...	...	4	5	9	
Alcoholic delirium.....	18	...	...	...	...	...	2	...	...	20	...	20	
Alcoholism.....	...	35	3	1	...	...	...	...	2	...	38	3	41
Drug addiction.....	2	...	3	1	...	...	...	1	1	...	6	2	8
Hypochondriasis.....	...	...	...	...	1	...	...	...	...	1	...	1	
Epilepsy.....	...	5	...	3	1	...	...	...	...	8	1	9	
Neurasthenia.....	...	2	3	1	...	...	...	...	1	2	4	5	9
Hysteria.....	...	3	1	...	1	...	...	...	...	...	5	5	
Organic brain disease.....	...	1	2	2	...	...	2	1	1	...	6	3	9
Cerebral concussion.....	2	...	...	...	2	...	...	...	...	...	2	...	2
Paralysis agitans.....	...	...	...	2	...	...	...	...	...	...	2	...	2
Typhoid fever.....	1	...	...	...	...	...	...	...	...	1	...	1	
Jaundice.....	...	1	...	...	...	...	...	...	...	...	1	1	
Tuberculosis.....	...	...	...	...	...	...	2	...	1	2	1	3	
Pneumonia.....	...	...	...	...	...	4	...	...	...	4	...	4	
Organic heart disease.....	...	1	...	...	...	...	...	...	...	1	...	1	
Fracture of skull.....	...	...	...	1	...	...	...	1	...	1	1	1	2
Carcinoma.....	...	...	...	1	...	...	...	1	...	1	...	1	
Nephritis.....	...	...	...	...	...	1	...	1	1	1	1	1	2
No diagnosis.....	...	...	...	...	...	...	...	...	1	1	1	1	2
Totals.....	34	19	72	44	69	38	15	7	7	15	198	124	322

TABLE II.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT SINCE THE OPENING OF THE PAVILION, FEBRUARY 18, 1902.

FORM OF DISEASE.	Recovered		Im- proved		Unim- proved		Died		Remain- ing		Total		Total	
	M	W	M	W	M	W	M	W	M	W	M	W		
Acute delirium.....	34	48	18	19	7	15	13	11	1	72	94	166		
Confusional insanity.....	11	5	27	30	22	32	5	4	3	65	74	139		
Melancholia.....	23	32	41	95	45	91	1	7	4	110	229	339		
Mania.....	7	15	15	25	26	39	1	..	..	49	79	128		
Primary dementia.....	2	6	21	10	42	22	..	..	1	..	66	38	104	
Recurrent insanity.....	1	..	11	20	13	15	..	..	..	..	25	35	60	
Chr. delus. insanity.....	..	..	2	6	41	43	..	..	..	..	43	49	92	
General paralysis.....	..	..	2	1	47	4	4	..	..	1	53	6	59	
Terminal dementia.....	..	..	33	33	115	93	21	17	1	2	170	145	315	
Imbecility and idiocy.....	..	..	19	11	33	30	1	..	..	..	53	41	94	
Alcoholic delirium.....	213	12	29	6	4	2	25	2	..	..	271	22	293	
Alcoholism.....	19	5	210	19	19	5	1	..	2	..	251	29	280	
Drug addiction.....	9	5	10	8	2	4	2	3	1	..	24	20	44	
Ptomaine poisoning.....	1	2	..	..	..	..	..	..	..	..	1	2	3	
Nephritis.....	..	..	1	..	1	..	8	1	..	..	10	1	11	
Eclampsia.....	..	1	1	..	..	..	1	..	1	..	1	1	4	
Epilepsy.....	..	..	17	4	20	7	1	..	..	..	38	11	49	
Neurasthenia.....	3	1	22	15	5	11	..	..	1	2	31	29	60	
Hysteria.....	2	9	1	19	1	4	..	..	..	..	4	32	36	
Chorea minor.....	1	1	..	..	1	1	..	..	..	..	2	2	4	
Exophthalmic goitre.....	..	..	1	..	..	..	..	..	..	..	1	1	1	
Arterio-sclerosis.....	..	..	..	..	..	..	1	..	..	..	1	..	1	
Hypochondriasis.....	..	..	9	..	4	..	1	..	..	..	14	..	14	
Organic brain disease.....	..	..	11	8	13	5	10	7	..	1	34	21	55	
Cerebral concussion.....	3	1	3	..	..	..	..	..	..	..	6	1	7	
Oedema of the brain.....	..	..	..	..	1	..	1	..	..	..	2	..	2	
Locomotor ataxia.....	..	..	1	2	..	1	..	1	..	..	1	4	5	
Myelitis.....	..	..	..	..	..	..	2	..	..	..	2	..	2	
Cerebro-spinal fever.....	1	..	..	..	..	..	..	..	..	..	1	..	1	
Meningitis.....	..	..	..	..	..	..	5	1	..	..	5	1	6	
Multiple neuritis.....	..	1	..	..	1	..	..	..	..	..	1	1	2	
Paralysis agitans.....	..	..	..	..	2	..	1	..	..	..	3	..	3	
Hydrophobia.....	..	..	..	..	..	..	1	..	..	..	1	..	1	
Tetanus.....	..	..	..	..	..	..	1	..	..	..	1	..	1	
Tuberculosis.....	..	..	1	..	2	1	6	2	..	1	9	4	13	
Typhoid fever.....	1	1	..	..	..	..	..	..	..	..	1	1	2	
Jaundice.....	..	1	..	..	..	..	..	1	..	..	..	2	2	
Pneumonia.....	..	..	..	..	..	..	8	1	..	..	8	1	9	
Heart disease.....	..	2	..	..	..	2	..	..	..	..	4	..	4	
Pernicious anaemia.....	..	..	1	..	..	..	1	..	..	..	..	2	2	
Chlorosis.....	..	..	..	..	..	..	..	..	..	..	..	1	1	
Septicaemia.....	..	..	..	..	..	..	..	..	..	..	..	1	1	
Gastro-enteritis.....	..	..	..	..	..	..	..	..	..	..	..	1	1	
Fracture of skull.....	..	..	..	1	..	4	1	..	..	..	5	1	6	
Multiple fibromatosis.....	..	..	..	..	..	..	..	..	..	..	..	1	1	
Carcinoma.....	..	..	..	1	..	..	..	..	1	..	2	..	2	
Malingering.....	..	..	..	1	..	..	..	..	..	..	1	..	1	
No diagnosis.....	..	..	..	..	..	..	..	..	..	..	20	14	34	
Totals.....	331	145	508	333	469	427	125	60	7	15	1460	1000	2460	

The total number of admissions since the first patient was received on February 18, 1902, is two thousand four hundred and sixty. Comments upon the work have been made from year to year in reports to your board, and if we review these records of experience of this period there is shown the gradual evolution of a principle. This is hardly to be dignified as a discovery in medical science, but rather as the demonstration of a truth of which earlier knowledge has been vague, and it relates to the vital question as to what constitutes insanity. The term has been applied to any individual showing disordered mental action, with the exception of cases of temporary delirium during some acute disease or injury. When there has been no aggressively apparent physical disease to explain the mental phenomena, the patient has been regarded as insane and disqualified for further independence or personal responsibility. The presumption is that the disqualification is permanent, although restoration is recognized as possible. The percentage of recoveries has been distressingly low, however, and the hopeless outlook would appear justified by the increasing population of institutions for the insane. We have learned from the observation of these twenty-four hundred cases, that there is no sharp dividing line between delirium and insanity, and that a prompt and definite conclusion may not be reached as to whether an individual patient is to be placed in one class or the other. In fact, the great majority of our patients represent an intermediate group in which symptoms of delirium are mixed with those of insanity in such combination as to leave doubt of the predominating element. As the word insanity, itself, stands for so serious impairment or destruction of the personality, the necessity of avoiding it, except when definitely applicable, is readily understood. We are thus dealing with patients who present symptoms of insanity, but are not insane. How shall they be designated? what are the conditions of disease? and how shall they be treated?

Scientific work or any other technical work is facilitated by the adoption of terms and phrases whose significance is generally understood. When a patient is said to have scarlet fever, a distinct group of symptoms is immediately recognized. And in mental medicine efforts have been made to arrange symptoms into groups, each group to have its designation. But when a patient is said to have "mania" or "melancholia," only a part

is told. It is known that his mind is disordered, and that his actions, speech and conduct differ from what they were in health. It is further indicated that he is in a state of exhilaration or depression, as the case may be. In any event there is a change in processes of thought; that is to say, in personality, the sum of the characteristics which distinguish the individual from every one else. This defies classification. There is no known pathology. No microorganism is present to explain the symptoms. There is absolutely no reason, as far as human knowledge goes, why one patient should present symptoms of mania and the other symptoms of melancholia. The only palpable fact is that the personality is altered.

It is true that the attention of alienists during the last few years has been directed toward analysis of the personality of the patient, so to look behind the symptoms and classify the individual. This presents difficulties and is largely stimulated by ardor for psychological theorizing, which might perhaps be better indulged in speculation upon why one man is a Republican and another a Democrat, or why one boy becomes a merchant and another a priest. The result has been the discovery or assumption of some intrinsic defect of organization, and to this *lusus naturae* the outbreak of active symptoms is ascribed. It raises sharply the issue of the relative importance of predisposition and exciting cause of disease. The advocate of this kind of diagnosis says to the patient suffering from mania or melancholia, "You have a defective brain, which shows itself in this disorder; the attack may pass off, but you will have others in the future." The assumption is not proved, for many patients have not been subjected to recurring attacks. The more hopeful observer says, "You have a susceptible brain, which, under stress, succumbs. You will recover from this attack, and from the experience gained, will avoid the causes to which it is attributed so as to protect yourself from recurrence." Mental science has not yet attained the precision which enables it to stamp any particular disorder of thought as decisive of incurability.

When the first year's work was completed, it became necessary to present a statistical summary, and tables, then generally accepted by alienist physicians, were adopted. The phrases "primary dementia," "confusional insanity," "melancholia," "mania" and "acute delirium," were placed in a group which

was to include all cases who presented prospect of recovery. By "primary dementia" was understood a condition of apathy and torpor of varying degree; by "confusional insanity" (a more euphonious phrase than "hallucinatory confusion"), a state of confusion with disturbances of the special senses, and moderate defect of consciousness; by "mania," mental and motor activity, restlessness and excitement; by "melancholia," depression of spirit; and by "acute delirium," a state of extreme physical prostration with involuntary and excessive activity of the muscles, hallucinations of the special senses and obliteration of consciousness. It was soon determined that these were not different diseases, but different manifestations of the same disease, or condition, whatever it might be, and that it was difficult in some cases to decide which designation should be used. It is quite apparent now that all of these patients are cases of exhaustion, associated with perverted mental action, in which the abnormal mental state is represented by stupor, confusion, excitement, depression or delirium, or some combination of these. One manifestation is common to all: physical prostration. They are really cases of acute physical disease with exaggerated or prominent mental symptoms. The mental symptoms are the manifestation of perverted action of the brain, due to abnormal conditions of circulation and nutrition of that organ. Strictly speaking this is not insanity. The disorder occurs in many persons of excellent personal and family antecedents. It is not necessarily due to dissipation or other vicious habits; on the contrary it follows too often hardships and privation which excite compassion rather than criticism. The common struggles of life are often too severe. The father whose limited income is insufficient and the mother whose wearying toil surpasses endurance are brought to the hospital emaciated, prostrated and in states of collapse and delirium, resulting from inordinate expenditure of strength, insufficient food and rest. Nor is disaster of this kind limited to adult life. The psychology of adolescence is one of the most important problems to be met by parents, educators and neurologists. A surprising number of patients between the ages of fifteen and twenty-five have been received in deplorable condition, the more to be regretted as occurring when life should be brightest and happiest and most alluring. The fortunate may contemplate with pity the man or woman whose youthful days have been spent in sickness and misery, who has never had the enjoyment that comes without responsibility.

Adolescence is the preparatory period when the young man or woman is emancipated from the control and guidance of parents to meet strangers in the rivalry and competition which constitute the so-called "struggle for existence." The child who has had all problems solved without personal concern, and whose tendencies, temperament and desires have been controlled and directed, is confronted by conditions entirely novel. Whether in professional or commercial life he meets others whose outlook, tastes and viewpoint are different, and he is obliged to adjust himself to a new environment, often changing with kaleidoscopic quickness. Physically and mentally he is to some extent prepared by excessive vitality. The bodily functions react quickly and vigorously, appetite and nutrition are sustained and sleep is refreshing. The energy and recuperative power of youth are proverbial. Two qualities only are wanting,—experience and discretion, and upon the lack of these disaster too frequently follows. The immediate causes are not always apparent, though overstudy and overwork are occasionally alleged. In many cases thorough inquiry leaves only the supposition that there has been a failure of adjustment to new conditions, that rapid growth has resulted in want of balance. The nervous disorders of youth do not always require hospital treatment. Hysteria, chorea, convulsions and other conditions included under the general term "nervousness" are common in general medical practice. Mental functions are involved in greater or less degree, and at times are dominating. Then the patient seeks relief in the hospital. The symptoms vary, but group themselves in two classes, in one of which excitement prevails, in another, stupor. In the former group there are great restlessness and incoordinated activities, for which the time-honored term "mania" may be used. This may reach a high grade, with disturbances of the special senses and partial or complete obliteration of consciousness, constituting actual delirium. The cases of stupor are profoundly lethargic, silent, inactive and inclined to resist care. They often move about automatically. Occasionally there are combinations of all forms, with sudden impulsive and even dangerous acts.

The study of these adolescent cases has had great impetus in recent years by the importation from Germany of the term "dementia praecox," a raucous phrase and difficult of interpretation. It carries with it the assumption of incurability, which

has been shown to be unwarranted, as many patients have recovered health and have remained well. Our experience justifies the faith that the prospect for recovery is good in all patients who do not present congenital defect or pronounced hereditary taint. Treatment in the hospital represents an incident in the career of the patient, in which active symptoms called for the resources of an institution, and our patients have returned home, with a warning to the parents and with instruction as to conservation of health and restraint of endeavor. They have learned by the event that understanding of the mental and physical resources is essential to the conduct of business, indulgence in recreation and the successful ordering of life. The fact that these patients recover health indicates that the disease might have been prevented. The training of children, however, requires knowledge, discernment and impartiality not universally possessed by parents, and the severe lesson must be had.

We thus become more and more reluctant to use the word insanity with its unpleasant significance. We would not say that certain cases of insanity are restored, but that there is a group of cases of physical exhaustion with prominent mental symptoms for whom recovery is to be expected. The mental state may be described as modified delirium or analogous with delirium, and should carry no unpleasant imputation. The patients require hospital treatment and the duty of the hospital is clear. Such patients should be received without question or formality and placed under restorative measures until, beyond any question, it is determined that the affection is permanent and the mind destroyed. Then the question of insanity may be discussed.

DISCHARGES.

Of the three hundred patients discharged, fifty-three recovered and one hundred and sixteen were improved. The percentage of cases distinctly benefited is fifty-two. Since the opening of the Pavilion the percentage of cases discharged as recovered and improved has been fifty-four. Of the twenty-four hundred and sixty patients admitted in the ten years, thirteen hundred and fourteen patients have returned to their homes with health restored. One hundred and seven patients were discharged unimproved, and twenty-two died. The causes of death were: exhaustion of acute alcoholic delirium, two; tuberculosis, two; pneumonia, four; organic brain disease, three;

nephritis, three; general paralysis of the insane, one; fracture of skull, one; old age, five; exhaustion of acute mental disease, one.

ENDOWMENT.

The endowment fund of five hundred dollars, the gift several years ago of Mrs. Julia J. MacCartee, has been lying unused, and from the accumulation of interest, a pool table was purchased and placed upon the ward for men. This has proved a most useful and abundantly patronized acquisition.

THE STATE OF THE PROPERTY.

During the year all parts of the building have been renovated. The walls have been tinted and floors and furniture varnished. New rugs have been purchased, and now all may be regarded as in first-class condition. Pictures have all been added, a method of decoration which might be still further utilized.

FINANCIAL STATEMENT.

Received from public patients.....	\$1,374 00
Received from private patients.....	10,708 84
<hr/>	<hr/>
Total.....	\$12,082 84
<hr/>	<hr/>
The number of day's treatment.....	7,836
The average income for each patient per week.....	\$10 80
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THE WORK OF THE NURSES.

The participation of the nurses in this important work is the greatest single factor of its success. The diseases under treatment constitute a class of self-limiting affections, the successful issue of which is determined by skill in manipulation. Routine measures, such as might be effectually and promptly carried out in the care of fevers, are known to be advisable, but the attitude of the patient introduces a problem permitting far less generalization, and requiring far greater study and contemplation. This must be analyzed and overcome, and, it is now well understood, by gentle means. It is not an easy task to gain the viewpoint of the patient and meet it acceptably, and days of observation are required before even partial progress may be made, days in which the patience, persistence and courage of the nurse may be subjected to severe test. It is a pleasure to record unqualified approval of the service given by the Train-

ing School, and the sincerity and enthusiasm with which this difficult work is done. Perhaps the best warranty is the universal expression of gratitude by patients on leaving the hospital. More satisfactory than that is the expression of solicitude and anxiety accompanying the daily report of the nurse, the truthful account of the incidents and the desire for instruction and discussion of difficult situations. It is a most promising sign of the healthful spirit of this department of the Hospital.

ACKNOWLEDGMENT.

The usual acknowledgment should be made of the cordial cooperation of the Attending Medical and Surgical Staff of the hospital, whenever there is need of consultation or assistance in the special problems presented by individual patients. Every call thus made has been promptly met.

The daily operation of the Pavilion rests largely upon the relations with the officials of the city and county. To the Commissioner of Charities and Corrections, Hon. William H. Storrs, is due more than formal acknowledgment of intelligent cooperation. Upon him frequently falls the duty of decision upon the merits of application for admission, and he has exercised every care to protect the hospital from encroachment of misdemeanants whose vices are more in need of correction than conditions of health.

Friends of the Pavilion have manifested abundant interest. Shortly after this department was opened in 1902, a book case and books were presented to the men's ward by Dr. Henry Hun, and a similar gift was made to the women's ward by Mr. and Mrs. P. K. Dederick, Jr. The serviceable character of these gifts has been shown by the abundant evidence of use in the bindings. The collection has been abundantly replenished by the kindness of Mrs. Martin H. Glynn, who sent in April, thirty-one volumes of a character well calculated to amuse and divert. Another highly appreciated source of diversion was afforded by a piano, for the use of which, from December to May, we are indebted to Mr. E. E. Guilford. Mrs. Thomas Hurst contributed a large assortment of sheet music. Magazines have been received from Mrs. Frederick Tillinghast, Mrs. Fred C. Ham, Mr. Thomas C. Lawler, and Dr. Arthur Sautter, and the subscription to *McClure's*, which has been enjoyed for several years, was renewed by "a friend."

Public Health

Edited by Joseph D. Craig, M. D.

DEPARTMENT OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, SEPTEMBER, 1912.

Deaths.

Consumption	21
Typhoid fever	2
Scarlet fever	0
Measles	0
Whooping-cough	1
Diphtheria and croup	2
Gripe	0
Diarrheal diseases	3
Pneumonia	6
Broncho-pneumonia	5
Bright's disease	20
Apoplexy	8
Cancer	7
Accidents and violence	13
Deaths over 70 years	28
Deaths under 1 year	18
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Total deaths	153
Death rate	18.60
Death rate less non-residents	14.47

*Deaths in Institutions.*Non-
Resident. Resident.

Albany Hospital	10	10
Albany Orphan Asylum	0	0
Child's Hospital	0	0
County House	4	4
Home for the Friendless	0	0
Homeopathic Hospital	5	4
Hospital for Incurables	0	1
House of Good Shepherd	0	0
House of Shelter	0	0
Little Sisters of the Poor	2	0
Public places	0	4
Penitentiary	1	0
Sacred Heart Convent	0	0
Dominican Convent	2	0
St. Margaret's House	3	4
St. Peter's Hospital	11	6
Austin Maternity Hospital	1	0
Albany Hospital, Tuberculosis Pavilion	4	0
Labor Pavilion	0	0
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Totals	43	33

Births	151
Still births	4
Premature births	3

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	7
Scarlet fever	1
Diphtheria and croup	13
Chickenpox	1
Measles	8
Whooping-cough	0
Consumption	15
Infantile paralysis	1
Total	46

Contagious Disease in Relation to Public Schools.

	REPORTED
	D. S. F.
Public School No. 2	1
Public School No. 8	2
Public School No. 17	1
Holy Cross School	1

Number of days quarantine for diphtheria:

Longest..... 17 Shortest..... 6 Average..... 10 1/6

Number of days quarantine for scarlet fever:

None.

Fumigations:

Houses..... 31 Rooms..... 138

Cases of diphtheria reported..... 13

Cases of diphtheria in which antitoxin was used..... 12

Cases of diphtheria in which antitoxin was not used..... 1

Deaths after use of antitoxin..... 1

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	9
Negative	10
Failed	0
Total	19

Living cases on record September 1, 1912.....	300
Cases reported during September:	
By card	21
Dead cases by certificate.....	3
	—
	24

Total	324
Dead cases previously reported.....	18
Dead cases not previously reported.....	3
Duplicates	0
Recovered	2
Removed	1
	—
	24

Living cases on record October 1, 1912.....	300
Total tuberculosis death certificates filed during September.....	21
Out of town cases dying in Albany:	
Albany Hospital Camp.....	2
County Hospital	1
	—
	3
Net city tuberculosis deaths.....	18

REPORT OF VISITING TUBERCULOSIS NURSE.

Cases remaining under supervision.....	11
New cases	7
Cases referred to Albany Guild Nurse.....	5
Cases sent to hospital.....	1
Left city	1
Cases remaining under supervision.....	11
	—
Total number of visits made.....	18

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	16
Initial negative	88
Release positive	4
Release negative	23
Failed	5
	—
Total	136
Test of sputum for tuberculosis:	
Initial positive	13
Initial negative	21
Failed	2
	—
Total	36

BUREAU OF MARKETS.

Market inspections	101
Public market inspections.....	23
Fish market inspections.....	2
Rendering plant inspections.....	1
Slaughter house inspections.....	1
Hide house inspections.....	3
Pork packing house inspections.....	3

MISCELLANEOUS.

Mercantile certificates issued to children.....	47
Factory certificates issued to children.....	34
Children's birth records on file.....	81
Number of written complaints of nuisances.....	42
Privy vaults	6
Closets	3
Drains	1
Plumbing	10
Other miscellaneous complaints.....	22
Total number of dead animals removed.....	320
Cases assigned to health physicians.....	72
Calls made	155

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

A regular meeting of the Medical Society of the County of Albany was held on the evening of March 12th, 1912, at the Albany Medical College.

Members present were: Drs. Bedell, Deitz, Drake, Draper, Douglas, Doescher, Fromm, C. G. Hacker, Herrick, Keough, Lyons, Lomax, J. Myers, C. H. Moore, Neuman, G. W. Papen, Sr., G. W. Papen, Jr., Reynolds, Ryan, H. Rulison, Sheldon, Van Slyke.

Meeting was called to order by President Bedell.

It was moved and seconded that the minutes of the last meeting be adopted without reading. Passed.

The names of Drs. John A. Farrell and Charles F. Myers were announced as candidates for membership. Drs. C. H. Moore and Drake were appointed tellers. The two names were voted upon separately and the tellers announced that both names received a unanimous ballot, whereupon they were declared to be duly elected as members.

The program consisted of a Symposium on the Stomach and was as follows:

"Anatomy," Dr. Drake; "Symptoms and Diagnosis," Dr. Malcolm Douglas; "Treatment," Dr. Neuman; "Surgery," Dr. C. W. L. Hacker.

Due to the illness of Dr. C. W. L. Hacker, his paper was read by Dr. C. G. Hacker.

The various papers were discussed by Drs. Jenkins, J. Myers, Lomax, Fromm, and C. G. Hacker.

Meeting was adjourned upon motion after which light refreshments were served.

EDWIN L. DRAPER, *Secretary.*

A regular meeting of the Medical Society of the County of Albany was held at the Albany Medical College on the evening of April 9th, 1912.

Members present were: Drs. A. J. Bedell, J. L. Bendell, Devoe, Draper, Donhauser, Fromm, C. G. Hacker, Happel, Houghton, Hinman, Jenkins, Lawyer, Lempe, Lomax, C. H. Moore, Morrow, J. Myers, G. W. Papen, Jr., H. Rulison, Traver, J. N. Vander Veer.

Meeting called to order by President Bedell.

Minutes of previous meeting read and approved.

The program consisted of a Symposium on Fractures, and was as follows:

"Morbid Processes in Repair of Fractures," Dr. H. S. Bernstein; "Fractures of the Skull," Dr. E. L. Draper; "Fractures of the Upper Extremity," Dr. G. G. Lempe; "Fractures of the Lower Extremity," Dr. J. L. Bendell; "Radiography of Fractures," Dr. W. H. Happel.

Meeting was adjourned upon motion after which a light supper was served.

EDWIN L. DRAPER, *Secretary.*

The Annual Meeting of the Medical Society of the County of Albany was held on the evening of May eighth, 1912, at the Albany Medical College.

Members present were: Drs. A. J. Bedell, Blair, Bellin, Conway, Cook, Curtis, Draper, Fromm, Grant, Hinman, C. W. L. Hacker, Harper, Jenkins, Keough, Lomax, Lyons, Lawyer, Lempe, Morrow, J. Myers, C. F. Myers, C. H. Moore, Neuman, G. W. Papen, Jr., H. Rulison, Rooney, A. Vander Veer, Vibbard.

Meeting was called to order by President Bedell.

Moved by Dr. Lomax that since there was no business transacted at the last meeting, the reading of the minutes be dispensed with. Seconded. Passed.

The report of the secretary for the year was read and accepted on motion.

The treasurer's report was read. Drs. Moore and Jenkins were appointed auditors and reported that they had found the same to be correct. Report accepted upon motion.

In the absence of the chairman of the legislative committee the secretary read his report which was accepted on motion.

It was announced that the board of censors had favorably acted upon the names of Drs. W. C. Egerton, Louis B. Mount and Elwin W. Hannock as candidates for membership. Drs. Lyons, C. W. L. Hacker and Fromm were appointed tellers and each name was balloted upon separately. The tellers announced that the three men were duly elected members of the Society.

Vice-President Keough took the chair and President Bedell delivered the annual address. At the close of the address Dr. Lomax moved that a committee of three be appointed to investigate recommendations made in the President's address and to report later to the Society. Seconded and passed.

ELECTION OF OFFICERS.

Nominations for the presidency of the Society for the ensuing year were then opened.

Dr. ROONEY nominated Dr. Morrow. Seconded. Dr. Hinman moved that the nominations be closed.

Dr. MORROW said that presidential lightning had never struck him and that for many reasons he must respectfully yet insistently decline the nomination.

Dr. ROONEY said that he must of course bow to Dr. Morrow's wishes but that it was with sincere regret that he was forced to withdraw his nomination.

Dr. BLAIR then nominated Dr. L. H. Neuman. Seconded.

Dr. HACKER nominated Dr. Jenkins. Seconded. It was then moved and seconded that the nominations be closed. Passed.

Drs. LYONS, HACKER and FROMM were appointed tellers and the ballot was taken. The tellers announced that Dr. Neuman had received fifteen votes and that Dr. Jenkins had received nine. Dr. Neuman was declared to be elected.

Dr. JENKINS moved that the vote be made unanimous. Seconded and passed.

Nominations for the vice-presidency were then opened. Dr. CONWAY nominated Dr. James F. Rooney. Seconded.

It was moved by Dr. GRANT that the nominations be closed and that the secretary be instructed to cast one ballot for Dr. Rooney for the vice-presidency. Seconded and passed. The secretary announced that he had cast the ballot and Dr. Rooney was declared to be elected.

Nominations for secretary were opened. Dr. LOMAX nominated Dr. Doescher. Seconded. Dr. RULISON nominated Dr. Draper. Seconded.

Dr. HACKER moved that the nominations be closed. Seconded and passed. The vote was taken and the tellers announced that Dr. Draper had received fifteen votes and that Dr. Doescher had received ten. Dr. Draper was declared to be elected.

Nominations for treasurer were opened and Dr. HACKER nominated Dr. Papen. Seconded. Dr. RULISON moved that the nominations be closed and that the secretary be instructed to cast one ballot for Dr. Papen. Seconded and passed. The secretary announced that he had done so and Dr. Papen was declared elected.

Nominations for censors were opened, five men to be elected.

Dr. NEUMAN nominated Dr. Curtis. Seconded.

Dr. ROONEY nominated Dr. Hinman. Seconded.

Dr. KEOUGH nominated Dr. Mitchell. Seconded.

Dr. RULISON nominated Dr. C. G. Hacker. Seconded.

Dr. NEUMAN nominated Dr. Ward. Seconded.

Dr. C. W. L. HACKER nominated Dr. Keough. Seconded.
 Dr. ROONEY nominated Dr. Powell. Seconded.
 Dr. C. W. L. HACKER nominated Dr. Zeh. Seconded.
 Dr. NEUMAN nominated Dr. C. H. Moore. Seconded.
 Dr. PAPEN nominated Dr. Jenkins. Seconded.
 Dr. RULISON nominated Dr. Lomax. Seconded.
 Moved and seconded that the nominations be closed. The vote was taken and the tellers announced that the result was as follows:
 Dr. Hinman, Dr. Curtis, Dr. C. G. Hacker, Dr. Ward, Dr. Jenkins.
 Dr. NELSON K. FROMM then read a paper on "The Salicylates in the Treatment of Acute Chorea, with the Reports of Cases."
 The paper was discussed by Drs. JENKINS, ROONEY and FROMM.
 Meeting adjourned upon motion after which a light lunch was served.

SECRETARY'S REPORT. YEAR 1911-1912.

There have been held eight regular meetings during the year, and one Memorial meeting to take suitable action upon the death of Dr. W. P. Brierley.

The meetings have consisted mainly of symposiums upon the following subjects: Heart, Lungs, Liver, Intestines, Stomach, and Fractures.

The meetings were attended by eighty different members and also a considerable number of third and fourth year students of the Medical College.

There were thirty-three members who took part in the various symposiums.

An invitation to members to present papers on subjects other than those included in the symposiums was not accepted with much enthusiasm, only one member availing himself of such invitation.

The Society lost one member through death, and one through transfer.

There has been one addition through transfer, four new members have already been elected and three names are to be acted upon to-night.

There have been eighteen physicians registered in the County Clerk's office. Of this number two have since moved away, three are internes in hospitals and two are advertising specialists.

The roster of the Society now totals 191.

EDWIN L. DRAPER, *Secretary.*

ANNUAL REPORT OF THE TREASURER OF THE MEDICAL SOCIETY OF THE COUNTY OF ALBANY, MAY 8, 1912.

Receipts.

Dues collected, May 12, 1911 to May 8, 1912.....	\$1,033.00
From Dr. Van Der Veer, on McCormack meeting, stamps,	
et cetera	28.50
Balance, May 12, 1911.....	79.18
Total	\$1,140.68

Expenditures.

To State Treasurer.....	\$ 603.00
Janitor service, 1910-1911.....	8.00
Janitor service, 1911-1912.....	8.00
Stamps	27.00
Jos. Reimers, caterer.....	185.00
Envelopes, (1,000)	1.00
American Association of Medical Milk Commis- sion, dues 1910-1911.....	15.00
Albany Medical Annals, for printing minutes.....	50.00
Printing, A. C. Meyer.....	8.50
Printing, S. H. Wentworth.....	104.63
	—
	1,010.13
Balance to date.....	\$130.55
May 8, 1912	G. W. PAPEN, JR.

Mr. PRESIDENT: Your Legislative Committee wishes to report that during the session of 1911-1912 the following bills relative to the regulation of the Practise of Medicine and the Public Health were introduced.

Adding a new section, III-a, to the Labor Law, requiring bakeries to be licensed by the State Department of Labor after inspection by the health authorities of the locality and by the Department of Labor. The Commissioner of Labor is to close bakeries not so licensed. These provisions are not to apply to hotels, restaurants and boarding houses. By Mr. A. E. Smith. To Labor and Industries Committee. Printed No. 1903. Int. 1546. (Same as S. 1164.)

Adding a new section, 175, to the Public Health Law, providing that no physician employed in a professional capacity by a common carrier of passengers, or who is the physician for the employees of such common carrier, or who is recommended by the same, shall be connected with or employed by any city hospital. Physicians employed by common carriers or benevolent associations made up of employees thereof must file in the office of the county clerk where they are registered, a statement of such employment. Violation is a misdemeanor. By Mr. A. J. Levy. To Public Health Committee. Printed No. 1908. Int. 1551.

Repealing sections 310 and 311 of the Public Health Law, which require the vaccination of school children. By Mr. Burd. To Public Health Committee. Printed No. 877. Int. 804. (Same as A. 864.)

Amending section 236 of the Public Health Law requiring that no pharmacist, drug clerk, or other employee in a drug store shall be required to work more than eight hours a day or forty-eight hours a week, except in order to make a shorter day of some day of the week, and providing that no drug clerk shall work for two pharmacists or drug stores more than eight hours a day in the aggregate. By Mr. Merrill. To Public Health Committee. Printed No. 1526. Int. 1312.

Amending sections 4, 5, 20, 21 and 23 of the Public Health Law by providing that when a local board of health in a town or village neglects

to perform its duties, the state commissioner shall have power to exercise their powers, the charges incurred to be charged to the municipality, and where a nuisance exists within the jurisdiction of two or more municipalities in which the local boards do not agree as to their respective powers, the commissioner may abate the nuisance and determine the expense to be paid by each municipality and making other provisions. By Mr. Brown. To Public Health Committee. Printed Nos. 1190, 1311, 1584, 1792. Int. 1053. Reported amended.

Amending sections 310 and 311 of the Public Health Law by striking out the provision that no unvaccinated person shall be received into any of the public schools of the State, and providing that the trustees of a school district, or board of education of a Union Free School district or city may exclude unvaccinated persons from a school whenever an epidemic of smallpox exists in the vicinity and the board of health notifies the trustees that such an epidemic exists. By Mr. Cheney. To Public Health Committee. Printed no. 1201. Int. 1064.

Adding a new section, 334a, to the Public Health Law, making it a misdemeanor to repaper or reckalsomine walls or ceilings of buildings or rooms used or to be used by human beings for tenements or working purposes, in cities or villages of 10,000 or more inhabitants without first removing all old paper or kalsomine and thoroughly cleaning the wall. By Mr. Wende. To Public Health Committee. Printed No. 202. Int. 1065. Reported.

Amending section 276 of the Village Law by providing that the board of sewer commissioners of a municipality or sewer district may contract for connection of the sewers with the sewers of another village, town or sewer district. By Mr. Allen. To Villages Committee. Printed No. 1472. Int. 1270. Passed.

Amending subdivision 21 of section 310 of the Education Law, by providing for the medical and dental inspection of school children at least once during each school year, and requiring the result of such examinations to be made part of the school records and a copy of the examination to be furnished to parents or guardian. By Mr. Merrill. To Public Education Committee. Printed No. 1525. Int. 1311.

Adding four new sections, 350 to 353, to the Public Health Law creating a board of examiners consisting of three members appointed by the Governor, one to be a surgeon, one a neurologist and one a practitioner of medicine, each with at least ten years' experience, to examine feeble-minded, epileptics, criminals and other defective inmates in State hospitals for the insane, State prisons, reformatories and charitable and penal institutions and to perform operations to prevent procreation by such persons when in the board's judgment the offspring of such persons would inherit a tendency to crime, insanity, etc. Persons so examined and operated upon are to be represented by counsel. By Mr. Bush. To Public Health Committee. Printed Nos. 1291, 1742. Int. 1137. Reported. (Same as S. 816.)

Amending section 836 of the Code of Criminal Procedure, relative to proceedings where persons in confinement appear to be insane, by

giving justices of the court of special sessions of a city of the second class concurrent jurisdiction with a judge of a court of record of the city or county, to call examiners in lunacy and conduct an investigation into the mental condition of the prisoner, and in a proper case commit him to a State institution for the insane. By Mr. Walters. To Codes Committee. Printed No. 754. Int. 704. (Same as A. 1921.)

Adding a new section, 336-a, to the Public Health Law, making it unlawful for any person or corporation to expose for sale any fruit stuffs preserved in glass or earthen jars, or packed therein, unless the can or jar is plainly stamped showing the day, month and year when the food stuffs were placed therein. By Mr. Willmot. To Public Health Committee. Printed No. 1730. Int. 1452.

Amending section 234 of the Public Health Law so as to require every proprietor of a pharmacy or drug store, who is not a licensed pharmacist or druggist, to have displayed on the exterior sign of the building, in addition to his name, the word "non-pharmacist," or "non-druggist," as the case may be, and on labels of drugs sold, and if a corporation, the exterior sign must contain the names of the president, secretary and treasurer, and the names of the board of directors. By Mr. Barnes. To Public Health Committee. Printed No. 1435. Int. 1244.

The committee hearings at which the Anti-Vivisection bills were discussed were well attended and entirely successful. The movement was practically killed in committee.

Respectfully submitted,

JOHN H. GUTMANN, *Chairman.*

MEMORIAL MEETING—WILLIAM HAILES, M. D.

A special meeting of the Medical Society of the County of Albany was held on July 10, 1912, at the Albany Medical College to take action upon the death of Dr. William Hailes.

The meeting was called to order by President Neuman.

Those present were: Drs. T. P. Bailey, Boyd, Cook, Draper, Heusted, Morrow, Neuman, Root, Ryan, Tucker and J. N. Vander Veer.

Remarks concerning the life and work of Dr. Hailes were made by Drs. Neuman, Tucker, Heusted and Root.

It was moved by Dr. Boyd that a committee of five be appointed by the chair to draft a suitable minute upon the death of William Hailes, M. D. Seconded. Passed.

The chair appointed Drs. Boyd, Tucker, Root, Bailey and Cook.

The following minute was submitted by this committee:

The Medical Society of the County of Albany, by this entry upon its minutes, records the great loss it has sustained in the death of Dr. William Hailes, one of its old and honored members. He was born in Albany in 1849; educated in the public schools and at the Classical Institute of the late Professor Charles H. Anthony; entered upon the study of medicine in the office of the distinguished surgeon Dr. Alden March, and was graduated from the Albany Medical College 1870. He was a diligent and brilliant student, popular alike with his classmates

and his teachers. In anatomy and surgery he was particularly proficient and his inherited mechanical skill and ability predisposed him to the study of microscopy in which he soon became technically expert. In 1871 he was appointed an instructor in the Medical College and organized classes in histology and medical microscopy. Laboratory work of this kind was at that time optional, but the large majority of the students recognized the value of his courses and were glad to take advantage of the opportunities which they afforded for securing a practical training in microscopical technic and in minute anatomy and pathology. These courses were at first given in a small room connected with the old Albany Hospital but at a later date the work was transferred to the south wing of the college building, previously occupied by the law school and subsequently known as Alumni Hall, and made part of the regular curriculum. In this room, which was fitted up with tables and lockers and served both as laboratory and lecture room, his courses in histology, pathology, anatomy and clinical microscopy were given for many years, and until the establishment of the Bender Hygienic Laboratory, when the work was transferred to more commodious quarters in the new institution and greatly enlarged in the scope.

In 1874 Dr. Hailes had been appointed to the professorship of pathological anatomy which chair had been endowed by his friend and teacher Professor Anthony, and he was subsequently connected with the department of anatomy, and later made professor of pathological anatomy, histology and fractures and dislocations. This chair either as active or emeritus professor he occupied until his death.

During the early years of his teaching the science of bacteriology had been gradually developing and he became an enthusiastic laborer in the new field which gave great promise of reward to those who cultivated it and was destined to yield a harvest of inestimable value to medicine.

That he might learn at first hand from some of the world's great workers he made several visits to Europe where he prosecuted his studies, chiefly in Germany, with the enthusiasm of youth and with signal success. In later life he loved to recur to these days spent in foreign study and travel and his descriptions of the places he had visited and men he had met, or under whom he had studied, were full of interest and made entertaining by his ready wit and quick appreciation of the humorous side of even common place occurrences.

Within the limits of this brief memorial minute no adequate account of Dr. Hailes' life and work, nor analysis of his character can be undertaken, but some of his distinctive traits may be briefly indicated.

As a teacher he was inspiring, encouraging and eminently helpful. He recognized and emphasized the salient points in the subject under discussion and set them in a clear light and proper perspective. His method if not always strictly logical, was invariably effective and convincing and his fluent and emphatic delivery compelled attention. He was never tedious and always interesting. His students made good progress and were stimulated to discover facts and learn for themselves by proper processes of observation and deduction. Many of them have

become distinguished and to hundreds of men who have studied under him the knowledge of his death will bring with it a sense of deep personal loss. As a laboratory worker in several directions he improved existing methods of investigation and he devised new and useful processes for preparing and mounting anatomical and microscopical preparations which served a good purpose in their day and were helpful to many. He was a man of many parts and had he been less versatile might have done a few things better but assuredly would not have done so many things as well.

As a surgeon Dr. Hailes early displayed signal ability. Possessing mechanical skill and a fair knowledge of physics he was naturally attracted by Roentgen's discoveries and he was one of the first in the vicinity to use the X-ray apparatus and employ it for diagnostic purposes.

As an operator he was daring but not reckless, original and resourceful. In abdominal surgery he performed many operations that are common enough now but at the time were novel and even startling. He did many intubations before the days of anti-toxin, improving the methods in vogue and operating with remarkable dexterity and success. In the treatment of fractures and dislocations his mechanical skill stood him in good stead and these subjects he not only taught with authority but practised successfully. In the care of his patients he was indefatigable and devoted, kindly, sympathetic and encouraging. He responded promptly to all demands made upon him, freely gave his services to the poor and in consultation was helpful, unassuming, fair, frank and generous.

In his family life Dr. Hailes was singularly happy and in the home circle he was seen at his best. He was a dutiful son, a devoted husband and a loving and indulgent father. He had many friends but cared little for society as such, and his leisure hours were spent with his family or devoted to such hobbies as photography or the cultivation of mushrooms which served as diversions and took the place of sports in which many find recreation. During later years his summer home on the Hudson below Albany gave him opportunity to indulge some of his tastes for country life and amid simple surroundings at "Bonnie Brae" he was supremely happy and loved to entertain his friends.

Dr. Hailes' last years though clouded by illness were not unhappy. About ten years ago he was prostrated by a cerebral hemorrhage. From the resultant paralysis he made a fairly good recovery but his vision in certain planes was never restored. He was able after a time to take up some of his work again, did a little lecturing, saw patients in his office and for several years was able to drive about and make some professional calls. But gradually such work was discontinued, and he retired from active participation in professional affairs though his mind remained alert and his memory of past events good so that he loved to see his friends, to tell stories and to live over again the past. He was generally cheerful and buoyant and if he contemplated the future it was illumined by hope rather than shadowed by fears. A few days before his death, while at his summer home, he suffered another stroke from

which there was no recovery and he passed away peacefully July 6, 1912, in his sixty-third year. His death brought sorrow to a wide circle of old students and devoted friends who had known and loved him, and in his passing this society has lost a member who during the years of his active productivity served it in many ways and contributed ably and generously to the promotion of its best interests and the further aim of its scientific work. Sensible of our own loss we are not unmindful of the greater bereavement which his immediate family have sustained and to the members of this inner circle we tender the expression of heart-felt sympathy assured that in the utterance of this feeling all the members of this society unfeignedly unite.

(Signed) JAMES P. BOYD, M. D.

WILLIS G. TUCKER, M. D.

ARTHUR G. ROOT, M. D.

THEODORE P. BAILEY, M. D.

DANIEL H. COOK, M. D.

Meeting was adjourned upon motion.

EDWIN L. DRAPER, *Secretary.*

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR SEPTEMBER 1912.—Number of new cases 139; classified as follows: Dispensary patients receiving home care, 18; district cases reported by health physicians, 0; charity cases reported by other physicians, 26; moderate income patients, 84; metropolitan patients, 11; old cases still under treatment, 105; total number of cases under nursing care during month, 244. Classification of diseases for the new cases: Medical, 35; surgical, 7; gynecological, 4; obstetrical under professional care, mothers, 43, infants, 43; eye and ear, 1; skin, 1; infectious diseases in the medical list, 5. Disposition: Removed to hospitals, 10; deaths, 5; discharged cured, 143; improved, 8; unimproved, 4; number of patients still remaining under care, 74.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 1; nurses in attendance, 1; patients carried over from last month, 0; new patients during month, 2; patients discharged, 2; visits by head obstetrician, 1; visits by attending obstetrician, 0; visits by students, 10; visits by nurses, 12; total number of visits for this department, 23.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,150; for professional supervision of convalescents, 474; total number of visits, 1,624; cases reported to the Guild by forty-four physicians; graduate nurses, 9, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 64; new patients, 106; old patients, 312; total number of patients treated during month, 418.

Classification of clinics held: Surgical, 13; nose and throat, 0; eye and ear, 10; skin and genito-urinary, 6; medical, 11; lung, 5; dental, 0; nervous, 1; stomach, 0; children, 14; gynecological, 4.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held Tuesday, October 15, 1912, at 8.30 P. M., at the County Court House.

Dr. H. A. Kurth read a paper on the "Symptoms and Management of Puerperal Sepsis." Dr. A. Grussner presented a paper on "Etiology and Pathology of Puerperal Sepsis."

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.—The third annual session of the Clinical Congress of Surgeons of North America will be held at New York City, November 11th to 16th, 1912.

STATE HEALTH EXHIBITION.—The State Health Exhibition shown at the Fifteenth International Congress on Hygiene and Demography, Washington, D. C., was exhibited at the State Educational Building, Albany, N. Y., by the New York State Department of Health, Monday evening, October 21, at eight o'clock.

INCREASING ACCIDENTS REPORTS.—The largest number of reported accidents for a single recorded quarter is shown in the Quarterly Bulletin issued by the Department of Labor. A total of 19,567 accidents is reported as occurring in the State within the past three months, of which number 13,731 took place in factories and 5,628 in building and engineering work. It is not known how far below the actual number is this reported total. The fact, however, that building accidents reported during the last quarter are 1,000 more than for the corresponding three months last year and factory accidents 3,000 more, indicates not only a change in classification but that many accidents were unreported last year and escape official detection now. If the present rate is maintained the total number of accidents for the year will be over 78,000 or 261 for each working day. The Department of Labor, even with its recent substantial increase in factory inspectors, is unable to compel the maintenance of proper supervision of factories. Factory inspection for safety is as yet a new function of the Labor Department, it is a science not yet mastered, on which the beginnings have been made, but not much more. The safety laws of the state, the most difficult of enforcement and the most important committed to the care of the Department of Labor, are the least well enforced. In connection with the Quarterly Bulletin, attention has been directed to the 1911 Report of the New York Commission which stated:

"It is quite true that in many cases factories are inspected oftener than once a year and perhaps as often as needed. The Department does not, however, investigate even all cases of serious accidents reported to it for the purpose of preventing repetition of them. It must be admitted therefore, that the State does very little work in inspection to prevent accidents and that its force is pitifully insufficient to cope with the

work prescribed for it under the law. It is quite possible, although unusual, that a foreman may go all his life in a factory in New York without seeing a State Inspector. It is the exception that a foreman or shop manager sees an inspector more than once a year. Since that is so, it is not to be imagined that the Department inspectors are a sort of accident police patrolling the State, a terror to careless employers. That is a very long way from the truth. Rather, they seem to be an over-worked force doing what they can in calling attention to remedying certain flagrantly unsafe conditions in factories."

THIRTEENTH NEW YORK STATE CONFERENCE OF CHARITIES AND CORRECTIONS.—The Thirteenth New York State Conference of Charities and Correction will be held at the Onondaga Hotel in Syracuse, N. Y., November 19, 20 and 21, 1912.

NEW YORK SKIN AND CANCER HOSPITAL.—The Governors of the New York Skin and Cancer Hospital announce that Dr. Charles L. Duncan Bulkley will give a fourteenth series of "Clinical Lectures on Diseases of the Skin" in the Out-Patient Hall of the hospital, on Wednesday afternoons from October 30th until December 18th, 1912, at 4.15 o'clock.

MEDICAL SOCIETY OF THE COUNTY OF MONTGOMERY.—A regular meeting of the Medical Society of the County of Montgomery was held in the assembly room at the Elks' Club on Thursday evening, October 17, 1912, at eight o'clock.

A paper on the "Significance of Some Urinary Constituents" was read by Dr. J. Bergen Ogden, Medical Director of the Metropolitan Life Insurance Company, New York City.

MEDICAL RESERVE PLANNED.—Bills have been prepared for presentation at the next legislature providing for the creation of the office of surgeon-general and the organization of a medical reserve in the national guard. It is reported that Governor Dix has expressed his approval of a medical reserve similar in organization to that of the regular army.

NEEDS OF STATE HOSPITAL.—An appropriation of \$365,000 for new buildings and needed repairs at the State Hospital for the Insane, Binghamton, is to be asked from the legislature at its next session.

SANATORIUM MAY BE REOPENED.—The Mountain Sanatorium, Binghamton, which was closed by order of the mayor, September 28th, may be reopened as the president of the Colorado Fuel and Iron Company has made the following offers to the city: Either to lend money without interest to keep the institution open until January 1, 1913, or if such a loan cannot be legally accepted to contribute direct one-fourth of the expense of keeping the institution open until that date.

COUNTY TUBERCULOSIS HOSPITALS.—Already twenty-one counties of the State have decided to build tuberculosis hospitals under the county hospi-

tal law passed in 1909. It is expected to bring the number up to thirty before the end of the year.

The Board of Supervisors of Winchester County has voted to purchase a site for \$40,000 for its new tuberculosis hospital which will cost about \$100,000. County hospitals will soon be opened in Fulton, Montgomery, Tompkins and Oswego counties.

HOSPITAL NOTES.—The cornerstone of the new Mount St. Mary's hospital, Niagara Falls, was laid September 29th, by Bishop Colton with impressive ceremonies. The building is to be made of cut stone and shale brick, will accommodate one hundred twenty-five patients and will cost about \$300,000.

The new German Deaconess Hospital, Buffalo, was opened for inspection October 1, and was formally dedicated October 6. It is believed that the old building of the hospital will be continued as an annex to the newer institution.

PHYSICIANS' HOSPITAL ASSOCIATION, SCHENECTADY.—The corporation known as the Physicians' Hospital Association has disbanded and the fate of the institution is undetermined.

PERSONALS.—Dr. STILLMAN S. HAM (A. M. C. '02), has been appointed a member of the Medical Staff of Ellis Hospital, Schenectady, N. Y.

—Dr. KENNETH D. BLACKFAN (A. M. C. '05), who for the past year has been Dr. Howland's assistant at Washington University, St. Louis, Mo., has gone to Johns Hopkins Hospital, Baltimore, Md., as the chief resident in the new Harriet Lane Memorial Hospital for Children. He is also an instructor in diseases of children, in the Medical School.

—Dr. L. R. HURLBURT (A. M. C. '05), is practicing at 102 Mayard St., Lockport, N. Y.

—Dr. RAYMOND MESSER (A. M. C. '09), is in the Bradford Building, Pittsfield, Mass.

—Dr. SPENCER L. DAWES, of Albany, N. Y., will address the Society of Medical Jurisprudence of New York at the Academy of Medicine, on December 9th, on the "Problem of the Alien Insane."

—Dr. CHESTER E. TRACY (A. M. C. '04), is now at Castleton, N. Y.

—Dr. JOSEPH F. HARRIS (A. M. C. '06), is now at the Long Island Home, Amityville, Long Island, N. Y.

The present address of the following members of the Alumni is unknown and information concerning them is desired:

—Dr. A. J. PEETS (A. M. C. '77).

—Dr. CLINTON HICKEY (A. M. C. '84).

MARRIED.—Dr. G. SCOTT TOWNE (A. M. C. '99), of Saratoga Springs, N. Y., and Miss Mary Thompson of Valley Falls, N. Y., were married October 3, 1912.

—Dr. TIFFANY LAWYER (A. M. C. '07), and Miss Charlotte M. Fisher, both of Albany, N. Y., were married, Tuesday evening, October 16, 1912.

In Memoriam

EDWARD B. ROOT, M. D.

Dr. EDWARD B. ROOT, an alumnus of the Albany Medical College of the Class of 1856, and one of the best known physicians and surgeons in Lake county, Ohio, died at Painesville, of that State, Friday morning, August 9, 1912, after an illness of six months.

Dr. Root was born at East Granville, Mass., September 2, 1831, and was nearly 81 years of age and unusually active up to the time of his last illness. On April 23, 1863, he enlisted in the 168th New York Infantry as surgeon and served during the War of the Rebellion. He was a member of Dyer Post, G. A. R., of Painesville, and also of the Royal Arcanum. During his younger days he was prominently identified with the Masonic lodge in the East. Dr. Root came to Painesville in 1865 and has enjoyed an extensive practice in his chosen profession for nearly fifty years.

A wife and one son, Dr. William E. Root, a Cleveland dentist, survive.

WILBUR FISKE LAMONT, M. D.

Dr. WILBUR FISKE LAMONT, of Catskill, N. Y., died of pernicious anaemia in the Albany Hospital on Thursday afternoon, August 1, 1912. He had practiced medicine in Catskill since October, 1899. Dr. Lamont was the son of William T. and Mary Rogers Lamont. He was born at Richmondville, Schoharie County, N. Y., on July 29, 1863. After attending the village school for several years he finished his preparation for college at the Cobleskill Union Free School. He entered Union College in the autumn of 1882 and became a member of the Delta Upsilon Society. He was a good student and a good athlete. He won the mile run in the field games of his freshman year and played shortstop on the baseball team during his junior and senior years. The first Allen essay prize was awarded to him on graduation. During the following year he studied medicine in the office of Dr. T. B. Van Alstyne of Richmondville and then entered the Albany Medical College, from which he was graduated in 1889, having been house physician in the Albany Hospital during the last year of his course. He was a member of the New York State Medical Society, the Greene County Medical Society and the New York and New England Association of Railway Surgeons, a director of the Catskill National Bank and a member of the First Reformed Church of Catskill. He married on April 26, 1890, Miss Grace Johnson of Catskill, who, with one son, Wilbur J. Lamont, survives him. Other surviving relatives are a sister, Miss Ella Lamont of Richmondville, and a brother, Professor William S. Lamont, of Newark, N. J.

Dr. Lamont's early death may be regarded as one of the tragedies of life. He was young, energetic and exceptionally successful. As a classmate of the editor of the ANNALS, through the seven years of aca-

demic and professional college training, he was specially linked to him by ties of friendship and sympathy. As a student he was persevering, attentive and particularly insistent in acquiring practical facts for his own use. He made no display, and may even be regarded as retiring; and, perhaps diffident. He manifested this same disposition of dogged persistence after graduation, and was generally known as devoted to his work, and to the personal interests of his patients. Thus as a young man, he soon attained an enviable reputation in the region he selected for his life's work. He appeared rugged, and his physical build with his somewhat phlegmatic or unexcitable temperament, bespoke for him a long and useful life. The malignant affection, which thus early cut him down, was a surprise to his professional associates, and an undoubted affliction to his host of patients. The grief and consternation were evident, and abundantly manifested at his home. His career may not be yet susceptible to close analysis, but in general terms, he may be described as a faithful representative of the old type of sincere and devoted general practitioners, a class gradually growing smaller, regretted by all who realize the enormous power for good they have exercised in the families who confide not only their healths, but the secrets of their anxieties and ambitions to the one man outside the home circle qualified and willing to receive them.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Manuel Pratique de Kinésithérapie. Fascicale II. H. STAPFER, Gynécologie. Librairie Felix Alcan, Paris, 1912.

In this work, the author attempts to demonstrate the feasibility and advantage of utilizing kinesitherapy for the relief of gynecologic affections. It is claimed that massage and gymnastics, properly employed, are capable of influencing most favorably a large number of pelvic ailments habitually regarded as essentially surgical. In its adaptation to gynecology, kinesitherapy must necessarily undergo a partial remodeling in order to prove really practicable and efficacious. The choice of a given manipulation as well as its mode of application are governed, above all, by the well-known and important principle of the selective action of certain movements upon the physiology of the abdominal and pelvic viscera.

The effects produced by massage and gymnastics are both reflex and mechanical; the former are by far the more important and may be either dynamic or inhibitory in character. The main result of the dynamic reflex is to increase arterial tension, while that of the inhibitory reflex is to lower it. This influence of abdomino-pelvic kinesitherapy upon the cardio-vascular system is so striking, indeed, that Stapfer is led to regard the abdomen as being the essential regulator of cardiac function.

Massage, as it is employed in gynecology, may be either indirect or direct. In indirect massage, the effect of which is purely reflex, the various manipulations (circular friction, vibration, etc.), are executed distinctly outside the pelvic zone and in the immediately surrounding abdominal region. The operator begins in one hypogastrium and gradually reaches the other by passing well above the umbilicus. The virtue of indirect massage lies in the fact that it exerts reflexly a very decided influence upon the pelvic circulation. It is therefore of great value whenever the element of pain, or the danger of spreading an infectious process, precludes the employment of direct massage.

In direct massage, the hands of the operator are placed somewhat in the position assumed for bimanual examination, and the various movements (circular friction, vibration, stroking or effleurage, stretching and malaxation), are communicated directly to the pelvic organs. The effect of this form of massage is therefore both reflex and mechanical.

As regards the local and specific action of gynecologic gymnastics, two essentially different results are obtainable according as one or the other of two very distinct series of specialized movements is employed. The one series (active flexion of the upper extremities, active abduction of the lower extremities, etc.) determines vaso-constriction, haemostasis; while the other (passive femoral circumduction, active flexion and extension of one lower extremity, the weight of the body resting upon it, etc.) favors vaso-dilatation and hyperaemia.

Stapfer outlines very carefully the general regulations which govern gynecologic kinesitherapy, and discusses in detail the various elements which may prove antagonistic to favorable results, as well as the manifestations which furnish the strongest indications for its exhibition. The conditions which he regards as being amenable to this form of treatment are too numerous and varied to be mentioned individually, but they may be conveniently tabulated as follows:

A. FUNCTIONAL DISORDERS.

1. Affecting menstruation: menorrhagia, amenorrhea, dysmenorrhea, etc.,
2. In the course of pregnancy: hemorrhage, retrodeviation, syncopal attacks, abortion;
3. During labor: perineal and cervical dilatation, expulsion of the placenta, hemorrhage;
4. During the puerperal state: subinvolution, retrodeviation, hemorrhage, infection.

B. ORGANIC DISORDERS

1. Cellulitis in its various localizations;
2. Metro-salpingitis;
3. Tumors of benign type;
4. Dislocations of the uterus, ovaries, etc.

Dorland's American Illustrated Medical Dictionary. A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Medicine, Nursing, Biology, and kindred branches; with new and elaborate tables. Sixth Revised Edition. Edited by W. A. NEWMAN DORLAND, M. D. Large octavo of 986 pages, with 323 illustrations, 119 in colors. Containing over 7,000 more terms than the previous edition. Philadelphia and London: W. B. Saunders Company, 1911. Flexible Leather, \$4.50 net; thumb indexed, \$5 net.

The entire work has been reset and many new words have been added—these include technical words used in many of the special subjects. The printing is excellent and the heavy faced type and the fact that each word is in a new paragraph add to the ease of rapid reference. Although flexible leather covers are of convenience, the book so bound does not keep its form as well when it is stood up on the shelf. Not only the accent but the pronunciation and etymology of every word is given. Veterinary and dental terms are given as well as words used in general medical and biological subjects. The book contains anatomic, dosage and therapeutic as well as other tables.

This volume is highly recommended to students and physicians.

T. O.

A Handbook of Practical Treatment. By Many Writers. Edited by JOHN H. MUSSER, M. D., LL. D., Professor of Clinical Medicine in the University of Pennsylvania, and A. O. J. KELLY, A. M., M. D. Volume III. Cloth. Price, \$6 net. Pp. 1095, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

An unusual interest attaches itself to this very valuable series by reason of the fact that since the publication of the first volume, both of the gifted editors have died, leaving the three volumes of the work, not as a monument to their services to their professional brethren, but rather as a capstone to that monument.

The previous volumes have been favorably commented on in these columns and the good impression conveyed by their perusal is in no way lessened by a careful study of the third volume. In it we have a study of constitutional diseases; diseases of the respiratory, digestive, urinary and nervous systems, diseases of muscles and diseases of the mind.

There are thirty-eight individual contributors and fifty-six separate articles. Many well known and respected names appear in the list of contributors, among them several surgeons of note who discuss the surgical treatment of the regions under consideration, a kind of collaboration of distinct value although not heretofore often pursued. The most striking thing about this volume is the five articles by Dr. Thos. B. Futch; striking by reason not only of their brevity but also because of their clearness and the most excellent common sense

which prevails in all of them, three things which can not be said of some of the others. As an illustration, Futcher devotes one page to chronic articular rheumatism and closes with this paragraph: "Rather than to have described the treatment of a disease which he holds does not exist, the writer feels that he will have accomplished more by having pointed out the affections that are oftenest mistaken for the so-called chronic articular rheumatism. When the practitioner meets with a case which he has heretofore been accustomed to call chronic articular rheumatism, he should by a careful study of the history of the affection and of the character of the deformity, decide which of the above diseases the condition most probably is, and treat it accordingly."

SPENCER L. DAWES.

Text-book of Medical Jurisprudence and Toxicology. By JOHN J. REESE. Eighth edition. Revised by D. J. McCARTHY. pp. 660. Philadelphia: P. Blakiston's Sons & Co., 1911.

As stated by the reviser the book is essentially a text-book for the student and a reference manual for the attorney and general expert. The chapter on Insanity has been extensively revised and the classification changed to conform to more modern practice. A concise chapter on Commitment of the Insane has been inserted. A resumé of Anaphylaxis has been added, also new material on formaldehyde and bismuth poisoning.

The book is very concise and readable and the illustrative cases cited add to its interest. Though it cannot take the place of the larger standard books on the subject, it should serve for the convenience of brief and ready reference.

T. O.

Pellagra. An American Problem. By GEORGE M. NILES, M. D., Professor of Gastro-Enterology and Therapeutics, Atlanta School of Medicine; etc., etc. Price, \$3 net. Pp. 253, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

Pellagra. History, Distribution, Diagnosis, Prognosis, Treatment, Etiology. By STEWART R. ROBERTS, S. M., M. D., Associate Professor of the Principles and Practice of Medicine, Atlanta College of Physicians and Surgeons; etc., etc. Price, \$2.50 net. Pp. 272, with illustrations. St. Louis: C. V. Mosby Company, 1912.

To most of the laity and to not a few physicians, "pellagra" is a new name and the disease thus termed, one with which they have yet to make even a passing acquaintance, for until within the past five years pellagra was practically unrecognized in the United States although known and described under a variety of colloquial names in Europe.

The not inconsiderable number of cases of the disease in this country, particularly in its Southern portion has been the occasion for a great deal of discussion in the medical journals and for the publication of

several books; of these latter we have two under consideration, one by George M. Niles, and the other by Stewart R. Roberts, both of Atlanta, Ga.

Much valuable information is to be found in each of the books, set forth in a clear and readable way and the authors have done much to advance us on our, as yet uncertain, way, by collecting the results of the clinical observations of many practitioners, for it must be confessed that, interesting as are the discussions, when they deal with etiology, the best they can give us is pure theory.

As to treatment, Roberts work is, on the whole, more satisfactory than is that of Niles.

S. L. D.

Studies in Cardiac Pathology. By GEORGE W. NORRIS, M. D., Associate in Medicine at the University of Pennsylvania. Large Octavo of 233 pages with 85 original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.00 net.

The text of this volume is mainly a consideration of statistical data bearing upon cardiac pathology, together with a quite full discussion of the pathogenesis, gross pathological anatomy and pathological physiology of each variety of cardiac lesion. Symptomatology and therapeutics are not at all considered. The text though of great value, is merely secondary to the main purpose of the volume and serves principally to explain and bind together in a more complete whole, the wonderful illustrations which are the *raison d'être* of the publication.

These illustrations, 85 in number, are photographic reproductions, natural size or but slightly reduced, of specimens in the museums of the principal Philadelphia hospitals. They are fine examples of the possibilities of photography in the study of gross pathological anatomy, and reproduce most admirably some remarkable museum specimens, illustrating practically all types of pathological change in, and congenital malformation of, the heart.

There is an excellent bibliography. The book is attractively bound and is printed throughout on heavy plate paper from large clear type.

C. K. W., JR.

Tumors of the Jaws. By CHARLES L. SCUDDER, M. D., Surgeon to the Massachusetts General Hospital. Octavo of 391 pages, with 353 illustrations, 6 in colors. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$6 net; half morocco, \$7.50 net.

This volume represents the first complete and exhaustive description of tumors of the jaws which has appeared in American medical literature. It is based upon a very careful study of the literature of the subject coupled with the statistics from the Massachusetts General Hospital and the personal experience of the author. The chief object of the volume is to present the subject in such a manner that these new growths may be recognized in their earlier stages when radical treatment is more certain to be attended by satisfactory results.

The subject matter is divided into nine chapters to which is appended a most excellent index. Chapters one and two deal with epulis and sarcoma of the jaws and many striking and illustrative case histories are presented. The different gross and microscopical features of these tumors are splendidly described and the general treatment outlined. Chapters three and four are devoted to the Benign Tumors of the jaws and the Odontomata, the latter being one of the most important and elaborate chapters in the volume.

Carcinoma of the jaws which occurs more frequently than sarcoma of the jaws is the subject of chapter five and every phase of this important tumor is carefully considered.

In chapter six the diagnosis and operative treatment of malignant tumors of the upper and lower jaws is discussed in detail.

Chapter eight is devoted to Leontiasis Ossea and the volume closes with an important and valuable chapter on Prosthesis.

The volume contains 379 pages of subject matter and 353 illustrations. The illustrations are especially to be commended. Selected with great care and splendidly reproduced they add wonderfully to the instructiveness and impressiveness of the work. From both the medical as well as the surgical viewpoint Dr. Scudder has made a most valuable contribution to medical literature, and one which embraces practically all that is of value and importance in connection with the subject.

A. W. E.

The Collected Works of Christian Fenger, M. D. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology at Rush Medical College. Two octavo volumes averaging 525 pages each, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Per set: Cloth, \$15 net; half morocco, \$18 net.

In these two volumes comprising 1,050 pages, are collected practically all the articles, 75 in number, written by the late Dr. Fenger and arranged in the order in which they were written. These volumes are the result of the action of the Council of the Chicago Medical Society in forming the Fenger Memorial Association. The Directors of this Association have, at the requests of Assistants, Students and Associates of Dr. Fenger, caused the volumes to be published.

The first volume opens with a brief autobiography of Dr. Fenger which gives a brief sketch of his varied and interesting career. In his early medical life he saw service in the Franco-Prussian war and after the war was ended he returned to Denmark where, after a short time, he was a candidate for the Professorship in Pathology. Not receiving the appointment he decided to leave his native land and went to Egypt. His chief reason for this move was that he was much interested in surgery and saw no future in Denmark. In 1877 he followed the advice given him by an American woman in Egypt and decided to go to America. Receiving no encouragement to remain in New York he went to Chicago where he located and soon became connected with the Cook

County Hospital. Honors began to fall to him soon after his location in Chicago and in the hospitals and laboratories of that city most of his important work was done.

His studies and writings cover every department of surgery and are especially characterized by the most careful and painstaking pathologic studies. Many of his articles have long since become classics and to many of his observations and conclusions but little has been subsequently added. One of the foremost and most accurate of observers who approached surgery from the pathological side, his writings will be an important part of surgical literature for all time. Such work as that done and described by Dr. Fenger never becomes out of date and now that it has been made possible to study his collected writings an increased benefit will accrue to anyone interested in Medical Science. Dr. Fenger's style was always concise and attractive and one cannot but appreciate the honesty, earnestness and intelligence of the man from his written word.

Many of the articles are illustrated and these illustrations have been very well reproduced. These volumes form a most important addition to American surgical literature and one without which no medical library will be complete.

A. W. E.

GYNECOLOGY

Edited by John A. Sampson, M. D.

The Relation of the Thyroid Gland to the Female Generative Organs.

JAMES R. GOODALL and L. C. CONN. *The Canadian Medical Association Journal, May, 1911.*

The writers report the history of a patient 69 years of age in whom the thyroid gland had enlarged synchronously with the onset and progress of tuberculosis of the pelvic organs of two years' duration. The uterus, tubes and ovaries were removed. The thyroid gland, which was the size of a cocoanut, returned to its normal size within four weeks after the operation. Six months after the operation the patient was well, whereas previously she suffered not only from dyspnoea, but also dysphagia due to the pressure of the enlarged thyroid.

They discuss at length the influence of the thyroid upon the genital system, and also the influence of sexual function upon the thyroid activity.

Under the influence of diminished secretion upon the genital system, they call attention to the well known facts that cretins who reach the age of adolescence suffer from under development of the sexual organs and procreation is impossible. In patients with myxoedema amenorrhoea is a common symptom, and under appropriate treatment a return to the normal condition occurs. In hyperthyroidism there is also very apt to be alterations in menstruation.

Under the influence of increased sexual function upon thyroid activity, the writers call attention to the frequent enlargement of that gland at puberty, and during pregnancy, which may terminate in exophthalmic

goitre. The involution of the gland subsequent to pregnancy may reach a pathological degree and terminate in myxoedema. They report a case of enlarged thyroid developing as an apparent result of abnormally frequent sexual relations.

They conclude that there is a very intimate relation between the thyroid gland and the ovaries, and that the activity of the former is in a measure under the governance of the latter. Ovarian hyperactivity is a frequent cause of the development of exophthalmic goitre, diminished or absent ovarian activity usually coincides with myxoedema. Puberty, menstruation, pregnancy, lactation and menopause exercise a profound influence upon thyroid secretion. Thyroid secretion and ovarian secretion do not supplement but neutralize each other. The ovary has two secreting structures—the corpora lutea and the interstitial cells, and they believe that the secretion from the latter is the one which seems to bring the ovary and thyroid into such close relation.

Conservation of Sound Ovaries and Tubes in Hysterectomies Near the Menopause, Except in Malignant Disease.

ROBERT L. DICKINSON. *Surgery, Gynecology and Obstetrics*, February, 1912.

The writer reviewed two hundred consecutive histories of individuals operated on more than six months ago. Full reports at least six months subsequent to operation were obtained in 131 instances and some of these covered years. The arbitrary limit of six months was chosen as it was found that the disturbances of the surgical menopause occurred within that time.

The writer attempted not to interfere in the circulation of the ovaries, and attaches the latter to the top of the cervix or vagina. In forty-one cases one or both tubes were left behind.

He found that the conservation of ovarian structure after hysterectomy showed that four-fifths of his patients were free from the disturbances of the surgical menopause, and the results were better where both ovaries were left than where only one or where resections were done. When disturbances did occur their character was less severe and more gradual than after their bilateral removal. Conservation after operations for tubal infections leaves more tender and troublesome ovaries than after conservation following hysterectomy for myomata, prolapse or the hemorrhages of chronic metritis. The menopause, i.e., the cessation of ovarian function is likely to occur earlier than the average time in women who have had the uterus removed though the ovaries are retained.

He believes that the ovaries should not be removed when taking out the uterus at or near the time of the menopause, except in cases of malignant disease or of definite ovarian infection. To preserve the functional activity of the ovary its circulation should not be impaired and the removal of the tube may cause this, and for this reason they should not be removed except in diseased conditions of the tubes and malignancy. In the forty-one cases in which one or both tubes were left no harm resulted.

The Treatment of Ectopic Gestation.

EDWIN B. CRAGIN. *Surgery, Gynecology and Obstetrics*, March, 1912.

The writer recognizes two classes of cases based upon the period of gestation. 1. Those of early ectopic gestation (under six months). 2. Advanced ectopic gestation.

The treatment of early ectopic gestation he considers under three heads: (a) Prior to tubal rupture, or abortion, (b) At the time of rupture or abortion, (c) Subsequent to rupture or abortion.

The treatment prior to rupture or abortion should be the removal of the pregnant tube by operation, as the risk is very slight compared to that to which the woman is exposed if left to the possible dangers of tubal rupture or abortion.

In the treatment at the time of tubal rupture or abortion, the writer calls attention to the fact that in a certain number of patients the rupture of a pregnant tube will result in a hemorrhage which, unless checked, will cause either by itself or with its accompanying shock a fatal issue. He believes that as a general rule there is only one sound method of treatment and that is the control of the hemorrhage by operation. The only debatable cases are those in profound shock—shall the operation be performed immediately or shall the patient be given time to recover from the shock. The writer prepares for operation, watches the patient carefully, and if they improve he waits and operates when the patient is in better condition. If they don't improve he operates at once. He believes that the affected tube should be removed. The treatment of the opposite tube should be determined by its condition and after a careful consideration of the individual case. He removes the larger blood clots, fills the abdominal cavity with salt solution and closes the abdominal wound without drainage.

In the interstitial variety of ectopic pregnancy he believes that it is usually best to remove the uterus.

The treatment of early ectopic gestation subsequent to tubal rupture or abortion depends upon the condition present. Unless suppuration has occurred the abdominal operation is preferable to the vaginal. In a few cases where considerable time has elapsed since the termination of the pregnancy and the hematocoele is firm and decreasing in size he has advised against interference without regret.

In the treatment of advanced ectopic gestation we must consider the life of the foetus as well as the mother. The writer believes in operating at the end of eight and a half months thus anticipating the spurious labor. He also believes that it is wisest not to attempt to remove the placenta but to stitch the sac to the abdominal wall and permit the placenta to come away gradually. If the child is dead the operation is postponed for four or six weeks and then the placenta may usually be removed at operation without danger of severe hemorrhage.

ALBANY MEDICAL ANNALS

Original Communications

INTRODUCTORY ADDRESS.

Delivered at the Opening of the Albany Medical College September 24, 1912.

By HENRY HUN, M. D.

The old school opens wide its doors for you, and in accordance with an ancient custom, surviving in a few schools, I greet you in the name of the Faculty. I bid you welcome and at the same time I bid you pause on the threshold and consider what manner of thing this is which you are undertaking. A band of skilled teachers stand ready to lay open before you the rich treasures of medical science and to initiate you into the mysteries of medical art, but in accepting their offer you cannot be passive recipients; you are undertaking neither an easy task nor one quickly ended.

Your work in the school, in the laboratory and in the hospital will be difficult and strenuous, but even after these are over and you have acquired that *minimum*, which the law requires you must have, in order that you may receive a diploma and a license to practise you will find that *maximum* of knowledge, which you should desire, can only be partially acquired by a life-long study. Your reward for this long, difficult work of preparation will probably be a comfortable, even ample, living, obtained by hard, often disagreeable, depressing and painful labor; but you will not acquire great wealth, or high social position, or idleness, or even much leisure for enjoyment or for the cultivation of aesthetic tastes.

In return for moderate financial ease a hard, studious, harassing life is before you. Is it worth while? Well, for myself, I can say that I think you have chosen wisely, and as I look back over the forty years that I have been studying and practising

medicine I see many mistakes made, but the choice of my profession is not one of them.

There is no life worth living that does not consist of hard and even painful work, and the medical life offers many other rewards besides the pecuniary one. I shall not attempt to enumerate them all, but there are three great characteristics and advantages of the practice of medicine which stand out prominently. They are: 1st, it is a useful work; 2nd, it offers a great opportunity for scientific study of fascinating interest; and 3rd, it is a work which brings you in intimate contact with your fellow beings and gives you abundant opportunity for personal service, than which nothing is more pleasant and ennobling.

Certainly no one will attempt to deny that medicine is a useful work. In its department of public hygiene it guards the health of the nation. There can be few works of greater importance than the supervision of the nation's supply of food and drugs, of the proper removal of the excretions in drainage, of the freeing of the country from malaria and other infectious diseases and of the general hygiene of the people in time of peace and of the preservation of the army from disease and of the healing of the wounded in time of war.

In the narrower, but perhaps the even more important, work of the general or special practitioner of medicine there is a double usefulness. It benefits the practitioner by the fee received, and it benefits the patient by relief from suffering, perhaps even from death. Doubtless most, if not all, decent occupations have this double value: benefiting both parties in the transaction, but the medical profession yields to no other in the value of the services rendered for the money received. It has ever been the glory of our profession that the helping of a sick or injured human being has been the first, and the receiving of a fee the second consideration. Charlatans, it is true, have always existed, but these parasites have been as nothing in comparison to the great mass of honest, faithful practitioners. These latter have held the confidence of the people and have held it deservedly and to the advantage of all concerned. For medicine is a subject which must be taken in great part upon faith. No one can understand it without much study, and the patient must have confidence in, and trust himself to, the physician. The former cannot with wisdom or safety interfere with the treatment. But in this grateful and confiding faith of the patient lies a danger and a temptation to the honesty of the physician.

When we buy a piece of dry-goods or hardware or a suit of clothes we can judge to a great extent of its quality and value, and know approximately how much to pay for it; a thousand exactly similar articles are sold on all sides. But no two medical cases are exactly alike and we are quite unable to judge the quality and value of any given doctor's advice in any given case. We cannot tell whether the doctor's instructions are in accordance with the best thought of the profession, or how much time in reading, observation or experiment he has spent in acquiring this knowledge.

In cases of severe illness the patient is anxious to get the best advice attainable, and in such cases there is always danger that the doctor not only will work on the patient's confidence in him and charge an excessive fee, but will increase the patient's fears as to his condition in order to get a greater fee and a greater glory; and that when two doctors are engaged in the same case they may enter into collusion and may look more closely after their pecuniary advantage than after that of the patient. All these things are discreditable and dishonest acts. There is no truer name for them. But not much good results from calling names; and I would found my objection to these practices not on moral grounds, but on grounds of practical experience; remembering that such practices will sooner or later inevitably seriously injure the profession at large, as well as the reputation of that member of it who adopts them, and that honesty is the best policy, but that a man who is honest from that motive is not in his heart an honest man.

There are three occupations: the three learned professions, which in the dawn of civilization were united in the same person. That strong man who had obtained the mastery over his people and who was not only their Ruler, but was also at once their Law-giver, their Medicine Man, and their Priest. These three occupations have long since become separate and all have thrown off to some extent the superstition and prejudice which controlled them in the oldest days and have slowly evolved along their separate and very different lines.

The law has freed itself from mystery, miracle and superstition the most completely, but it has, it seems to me, somewhat lost the feeling of, and the belief in, its essential duty of preserving justice for all men. It has in the active pur-

suit of practical affairs rather lost sight of its highest function. It has become, more than the other professions, commercialized. Some, perhaps many, lawyers work rather for money than for justice. The lawyer's fee is dependent not so much on the time, labor and skill involved, as upon the ability of his client to pay the fee: that is upon the amount of money involved in the suit. Some lawyers are willing to aid their clients in, if not breaking, at least evading the laws; thus acting against the public interest, and charging enormous fees for such doubtful service. The consequence is that law-suits are so expensive that only rich men or corporations can take part in them, except on a kind of gambling on the part of the lawyer with an exorbitant fee if successful. The result is, I am told, that legitimate legal business has greatly diminished and that many lawyers are becoming promoters and use the law as a stepping-stone to enter into corporation business and wealth. The law, if not the lawyers, has fallen upon evil days.

The priest has never descended to commercialism (which is, as I understand it, the putting of the acquisition of money above the accomplishing of the best possible work, as one's life's aim). He, the priest, has always, with the few exceptions of the "Princes of the Church," lead a life of great, or at least relative, poverty. He has stood for the highest ideals of life as he has understood them, and the sincerity of his purpose has been rarely questioned. If, notwithstanding this, the church also has fallen, perhaps, upon evil days, it is not because the priests have been too honest, but, in my opinion, because they have been too anxious to hold the faith handed down by the fathers and have not adapted themselves to the advance of knowledge.

I have made these unpleasant criticisms of our allied professions not in malice or in uncharitableness, but because if medicine is to still maintain the ideal of the greatest possible usefulness it must learn from these unfortunate experiences of its neighbors and friends and must avoid the evils of commercialism on the one hand and of self-satisfied certainty that it already possesses all truth on the other hand.

During many centuries the great bulk of the medical profession, doubtless with many exceptions, has held itself somewhat above mercenary considerations and consequently has been held in honor and esteem. If we are to continue to be so regarded, nay, even if the profession is to continue in existence,

we must deal honestly with the public. As sanitary methods are adopted in our civic life our practice grows less, let us not make matters worse by losing public confidence and the belief that we are the honest men that our fathers were before us. Let us strangle and kill commercialism as it first begins to show itself in our profession and let it never gain ascendancy over us. Let it still be our glory that we lead useful lives and give more than we receive.

But besides being honest men who are leading useful rather than mercenary lives, we have another duty, which really adds another great pleasure to medical life. We must make a constant revision and increase in our medical knowledge: we must not be satisfied with what we have already learned: and this brings us to the second branch of our subject: scientific study and investigation.

Medicine at its origin was deeply immersed in mystery. Its practice consisted in a mass of superstitions, incantations and acts handed down by authority, and its results were miracles, to be acknowledged, and paid for, before the shrines of the gods. Slowly and painfully in the face of many obstacles medicine has slowly unwound from itself the swaddling clothes of mystery and has ceased to implicitly obey the command of authority. It has begun the study of life, the injuries and harmful influences which mar it and the reactions which it makes to them. It has already become evident that these reactions, dangerous as they may appear to be, are essentially curative.

This, then, is the study of medicine: life, its ills, and its cures. Its magnitude is inexhaustible, but each minute question in it is of fascinating interest and has countless relationships with every other department of this never-ending study. Here is a study which can occupy every moment of your life and which will have the most intimate relations with your daily practical work. The work has barely commenced; although, even now, it has yielded a wonderful harvest. If you can advance the work, even a little, you will do a great service to mankind and hand your name and life-work down to undying remembrance: to a fame greater than that of many kings and princes and statesmen. It is not, however, for fame that you will pursue the study. The interest of the subject, if you have within you any desire for knowledge, will chain you to this work.

Since the dawn of medical knowledge it has been known that certain chemical substances taken into the body are of considerable value in many forms of illness. To thoroughly study these chemical substances: the so-called drugs, to weed out the harmful and useless, to define the value and limitations of the useful ones, is a study well within the power of any practitioner. The absence of any such critical study by physicians a hundred years ago was one of the principal factors in the origin of homeopathy, a revolt against the nauseating and useless dosing of our fore-fathers. But the pharmacopoeia of our fathers, important though it is and probably ever will be, is daily becoming less important.

In recent years it has been discovered that a number of glands, previously considered of little importance, exercise by their so-called "internal secretions" a profound influence on the nutrition of the body. The removal of these glands when their function is excessive, the feeding of the extracts of such glands removed from animals to persons in whom their function is feeble or wanting, has led to some of the most brilliant cures. In recent years it has also been discovered that most diseases to which the human flesh is subject are caused by the entrance into the human body of certain minute forms of life: the so-called germs and micro-organisms. It has been discovered further that these micro-organisms produce a local action at that point of the body at which they grow and a general or remote action at distant points of the body, in consequence of certain easily soluble poisons, or toxins, produced by the growth of these germs and carried by the blood all over the body. We have learned by careful study not only that the body protects itself against these germs, both locally and generally, but also to a great extent how it does this. We have put this knowledge to a practical use in the prevention and cure of disease by the same means which nature herself uses, and this is one of the greatest steps in advance that medicine has ever taken. We can certainly assist nature and may, perhaps, improve on her methods, or at least use them more efficiently.

Finally we have learned that in many cases of disease the patient is overcome by fear: is more frightened than hurt; that many illnesses are more mental than physical, and that even in physical diseases this mental condition of fear is a most important factor. In such cases the physician must give the patient courage and confidence, must replace fear by hope, must practise

what is called psycho-therapy; and this personal influence of the physician is generally more important than his drugs, and indeed the effect of the drugs is often rather mental than physical, and act somewhat as did the amulets and charms of an earlier and more superstitious day. Our failure to recognize this important element in treatment has been one of the factors leading to the rise of Christian Science and other forms of mental healing.

There has, thus, in recent times, been opened up what seems to us older practitioners a real wonderland in the prosaic realm of medicine. The study of these conditions is sufficient to tax the full power of any student and is of unsurpassed interest.

Thirdly and lastly there is a great personal human interest in the practice of medicine. It has been said that the priest sees people at their best, the lawyer at their worst and the physician as they really are. We physicians do not need to turn to novels or to the theatre for our romance. We see daily enacted the real comedies and tragedies of human life and we have our own, and a very real, part in the laughter and joy and, above all, in the grief of our patients. We see the elemental passions and their results laid bare. We see the follies of one generation bearing fruit in the next. We greet the little soul at its entrance into this stormy world and we, better than any one else, know and can study the influences, pre-natal and post-natal, which surround it and the effects they produce. But we are not merely passive spectators. To a great extent we play our part in the unfolding of the little drama. We are trusted friends of all and can often accomplish good. And if we succeed and see good follow from our efforts we have a reward which is really worth while.

Such is the life and the work of a physician. Such is the life upon which you are entering. It is hard, there are many disagreeable and painful duties in it, you will have no time that you can surely call your own; but it has its recompenses and its joys. If you are to receive these recompenses and joys, if you are really to enter into the inmost lives of your patients and mould them for good, you must yourself be worthy of this position, you must not only understand medicine, but must have a clear intellect, a strong upright character and a loving heart. To a very great extent your characters are already formed but you are still at an age where they can be greatly modified and changed, whether for better or worse.

There are many evils in your path which may prevent your developing into the wise and trusted physicians which you ought to become. These are the evil spirits of excess, natural to your fresh budding manhood, which beguile you into paths of apparent pleasantness, whose end you see not. Indolence is one of these. A little quiet loafing for rest and recuperation and for thinking things over is really very desirable. It is not the man who is in unceasing restless activity who does the best work. But a very little indolence should suffice you. You have not much time to spare for it, while the golden hours of opportunity are rapidly passing by. You must remember that old Father Opportunity has a closely shaven head, except for a long forelock. If you do not clutch this as he approaches, you will grasp in vain at his bald pate as he rushes by.

Then there is the lesser degree of indolence called inaccuracy and superficiality, sins of especial danger in medicine: a branch of knowledge which commenced in mystery and has scarcely yet become one of the exact sciences! The inaccurate, dogmatic man makes one of the very worst types of medical practitioner. When you study you should not indolently skim over the surface, but should learn thoroughly. There are some few facts and ideas in medicine of which we are certain and we can act upon them with certainty. These facts, we must grasp and thoroughly understand. We must not be content with any half-way knowledge. But there are many, many, more ideas in medicine which, we believe to be true, but cannot definitely prove. We must act upon these beliefs too. We cannot wait till they are proved true; but we should always recognize that these are doubtful matters and should not obstinately receive and maintain them as truths. We should make a sharp division between what we know and what we don't know as Dr. Gordinier once said in an introductory lecture in this room.

Then, there is temperance in drinking, for certainly excess in drinking is a very dangerous enemy. A glass of wine loosens up the restraints and barriers with which a man has learned by bitter experience he must surround himself in his general intercourse with his fellow men. It makes him more genial, more truthful and more lovable, even though it may bring with it the loss of will-power and the other frightful dangers of excess. You are young and natural, you have not yet had the experiences which make you cautiously guard your speech and

acts lest they be misrepresented. If you resemble former classes you are exhilarated and boisterous enough without any artificial stimulation, and so the wine cup is not for you, or if at all, only at rare intervals moderately, that is temperately, never intemperately.

Finally there is sexual immorality, which lowers into bestiality the finest and highest of all human relationships and which is certain to be followed by unpleasant complications and remorse; it being a violation of the law of God and Man. You will learn in your school work the terrible diseases which result.

All of these vices are very apt to become habits and remain to handicap us through life. But one of the worst features of yielding to these temptations is neither the forming of bad habits nor the immediate troubles they produce. Bad as these are, they are nothing to the remote ills which flow from them, even in this world. The date of their commission has long since passed. You have repented of them and mended your ways. You have reached by hard work the very pinnacle of success, when you are suddenly and unexpectedly called upon to pay the penalty for the crime committed in your youth, which you may even have forgotten. You will see very many times in your practice the sins of a man's youth destroying him in his later life. So then I would warn you against the manifold dangers which lie in your path.

But it is not by observing a lot of negations, it is not by refraining from temptation that a man reaches eminence or succeeds in being of distinguished service to mankind or reaches his highest ideals and destinies. A man might obey implicitly all the negations in the "decalogue," and still be an unworthy and despicable specimen of mankind; a man might cast the evil spirit of vice out, and far away, only to have him return with seven other devils of the same kind and make the man's latter end worse than his first. A man must not be a negation, he must be positively affirmative, if he is to accomplish anything. Christ summed up the negations of the decalogue in a few words of positive affirmative command, which if a man obeyed, he could not fail to fulfill the highest aims of his destiny. If you are to reach those mountain heights where great men walk, you must be so filled with a desire to attain your ideal that there is no place in your heart and soul for anything else. Temptations will not tempt you. Your one desire will be to strive and

struggle on after that one thing in the world which seems to you to be the most desirable.

You are now engaged in laying the foundation for future achievement. The work which you are doing now is seen by few and later will be covered over by the work which you will render humanity in your daily life and which will be seen by all men. But if your foundations are not broad and deep, if there is any slovenly work in them, the splendid edifice which you are to erect upon it and which, I hope, will attract and dazzle the eyes of men, will hardly be completed before it will begin to crack and crumble and even if it does not fall down will be of little use. It may even be dangerous. Your life's work has come to nothing, you must stop work on the superstructure and painfully and laboriously underpin your foundation which is always a difficult and sometimes an impossible task.

Therefore, be fired by an overwhelming love of your profession and with the aid of your teachers here in the school lay a broad, deep and strong foundation of accurate knowledge for your work in the world. And when success comes, as it surely will, do not let your large practice smother in you altogether your love of the science of your art. Do not look upon your patient as a gold mine to be exploited, but rather as a suffering being whom it is your privilege and joy to aid towards health, and do not be content to treat merely his physical disabilities, but inspire him with confidence, hope and a sense of his importance to the world.

REPORT OF A YEAR'S WORK BY DRs. McMULLEN AND STANTON IN GENERAL SURGERY.

By E. MACD. STANTON, M. D.,

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The permanent standing of a surgical procedure is determined not by the exceptional results which may be obtained by some master in a particular line of work, but by the average results which are obtained by other surgeons using the same method. For the most part the available data purporting to show the results obtained in the many special fields of surgery have emanated from the clinics of those who have devoted par-

ticular attention and skill to the special line of work the results of which they have reported; and just in so far as these reports represent the exceptional rather than the average results, they are liable to be misleading. It is thus seen that any data which helps to give a true perspective of the average rather than the exceptional results must be of some service in determining the real value of a surgical procedure and it is with this object in view that I have attempted to give a concise summary of the results obtained by Dr. C. G. McMullen and myself in our operative work during the year 1911.

It would be neither interesting nor instructive to review all of this work in detail. Instead, the accompanying tables have been prepared in such a way as to show the diagnosis and the character of the operative work performed in each class of cases. The tables have been made to include all patients operated by us during this period and in addition we have included a number of cases which were treated by conservative methods but which in the judgment of other surgeons might have been considered as demanding operation.

In addition to the tables certain problems which presented for solution during the course of the year's work are discussed more at length.

GENERAL SURGICAL TECHNIC.

Our operating room technic has been changed but little during the past five years. In April, 1911, we discontinued the soap and water alcohol bichloride method of cleansing the field of operation and substituted the benzine-iodine method of Bastionelli.¹ The change was made because the rapid evaporation of the benzine makes it easier to keep the patient dry and warm during the operation and not because we expected better results as regards wound infections. The method has proven simple and effective.

ANAESTHESIA.

While ether given by the drop method has remained the anaesthesia of choice in the greater portion of our major operative work we have used nitrous-oxide and oxygen given by the Gatch² rebreathing apparatus in a considerable number of cases. Intra tracheal insufflation has also been used in a few cases.

¹ MAYO, W. J. *Jour. Minn. Sta. Med. Assoc. & N. W. Lancet*, Sept. 15, 1910.
BECKMAN, E. H. *Interstate Med. Jour.*, 1911, XVIII, No. 7.

² GATCH, W. D. The Use of Rebreathing in the Administration of Anaesthetics. *Jour. Amer. Med. Assn.*, 1911, LVII, p. 1593.

Both of these methods are undoubtedly valuable additions to our anaesthesia armamentarium but until they have been more thoroughly tried out under all kinds of conditions their use should probably be limited to cases in which the drop ether method is for one reason or another contraindicated.

ACUTE EMPYEMA.

The two cases of empyema were operated under nitrous-oxide-oxygen anaesthesia with the patient lying face down upon the table. In these cases we always make a second intercostal incision at some distance from the rib resection thus allowing for through and through tube drainage which seems to materially hasten the final closure of the sinus.

TONSILS AND ADENOIDS.

Forty-four patients were operated for hypertrophied or chronically infected tonsils. A complete tonsillectomy was done in each case using general (ether) anaesthesia in children and local (cocaine) anaesthesia in most of the adults.

TUBERCULAR GLANDS.

In children we have removed only the obviously involved glands through appropriate incisions,³ and in cases with considerable suppuration have limited our operative interference to drainage of the abscess and removal of the caseating gland or glands by the aid of the curette. In adults on the other hand we have made it a rule to remove all of the gland bearing fascia according to the technic of Mayo and Judd.⁴

ACUTE APPENDICITIS.

Cases of acute appendicitis have been treated according to principles previously emphasized in several papers on the subject.⁵ Intermediate stage cases (3rd to 8th days of disease) except three mild cases with no clinical evidence of peritonitis, were treated by the Ochsner method of peritoneal rest until the

³ DOWD, C. N. The Surgical Treatment of Tubercular Cervical Lymph Nodes. *Ann. of Surg.*, Vol. 42, p. 42.

⁴ JUDD, E. S. Treatment of Tuberculous Glands of the Neck. *Ann. of Surg.*, Dec. 1910.

⁵ STANTON, E. MacD., 1. The Sequence of the Pathological Changes in Appendicitis. *Jour. Amer. Med. Assn.*, June 10, 1905 and *Albany Med. Ann.*, Dec. 1905.

² The Sequence of Pathological Changes in Appendiceal Peritonitis. *Surg. Gyn. & Obst.*, April, 1928.

³ A Critical Analysis of a Series of 180 Cases of Acute Intraperitoneal Infections. *Albany Med. Ann.*, May, 1910 and *N. Y. Med. Journ.*, Aug. 27, 1910

subsidence of the acute symptoms. The most severe intermediate stage cases gave us practically no worry after they were put on the Ochsner treatment. Late abscess cases seen after the first week were operated immediately or kept one or two days on the Ochsner treatment before operating.

Two deaths occurred in this series one of which was due to an accident, the other death occurred in a patient who was moribund on admission, no diagnosis having been made until after the patient was in an absolutely hopeless condition.

The accident occurred in a case in which a small sharply localized abscess was drained with a rubber tube leading into the abscess cavity the upper part of the tube being surrounded by a gauze coffer dam to protect the general peritoneal cavity. The day following the operation this patient developed symptoms of general peritonitis and an examination of the dressings showed the drainage to have been pulled out of the wound probably at the time the patient was coming out of the anaesthetic. Autopsy showed that this disarrangement of the tube and gauze had allowed the contents of the abscess cavity to drain directly into the peritoneal cavity.

The other case was that of a man aged 67 years who previous to the onset of the general peritonitis had been up and about for a number of days with a large undiagnosed retrocaecal abscess. Sudden rupture was followed by immediate collapse and patient's condition was hopeless when the family physician was called.

CHRONIC APPENDICITIS.

For some time past we have carefully checked the symptoms, the pathological findings and the end results in all cases in which we have considered the possibility of a chronic appendicitis with the result that we have come to the following conclusions⁶ regarding this disease.

The majority of patients suffering from chronic appendicitis give a history of having had one or more attacks of acute abdominal illness, with a sequence of symptoms recognizable as those of an acute appendix attack, namely, sudden severe abdominal pain usually beginning in the epigastrium or mid-abdomen, accom-

⁶ STANTON, E. MACD. Chronic Appendicitis: A Critical Study of Post Oper. End Results. *Ann. of Surg.*, June, 1911.

panied by nausea and vomiting and following by a period of pain and tenderness in the right lower quadrant.

In our experience appendiceal dyspepsia has been characterized by symptoms strikingly analogous to the earliest symptoms of acute appendicitis, namely, attacks of epigastric or mid-abdominal pain or distress but only rarely accompanied by subjective symptoms referable to the region of the appendix. During those attacks the pain or distress is nearly always increased by food intake.

Pain confined chiefly to the right lower quadrant and not associated with attacks of epigastric pain and nausea is seldom due to the appendix, and before making a diagnosis of chronic appendicitis in these cases every other possible conditions should be excluded.

The majority of our failures have been in patients complaining of right inguinal pain associated with chronic constipation. At operation these patients have presented an unusually long or dilated caecum, usually accompanied by other evidences of enteroptosis but no demonstrable lesion of the appendix, and appendectomy alone has not cured these patients.

As a result of the above studies the number of operations performed by us under the diagnosis of chronic appendicitis has been materially reduced from the figures of former years. The eight cases operated under the diagnosis of chronic appendicitis all showed a definite pathological condition amounting essentially to an obstruction of the lumen of the appendix. All of these patients have been relieved of their symptoms by the operation. Eight other patients were operated for intractable pain in the right lower quadrant thought to be due to a Jackson's Membrane or a Lane's Kink. A Jackson's Membrane was found in three and a possible Lane's Kink in two others. Three showed only an abnormally long movable caecum but none showed any noteworthy trouble with the appendix. It is too early as yet to estimate the end results in these cases.

OPERATIONS ON THE THYROID.

Six cases of goiter were operated during the year, including one simple colloid, one encapsulated adenoma and four hyperplastic thyroids with typical symptoms of hyper-thyroidism. The one death in this series was due to post operative hyper-thyroid-

ism and occurred eight hours after an excision of the right lobe in a patient who had been under preliminary medical treatment for some time. When first seen, this patient was suffering from a very severe grade of intoxication with well marked evidences of cardiac incompetency, and it was planned to attempt a simple ligation only after prolonged rest and medical treatment but under rest in bed her condition improved so rapidly that at the time of operation it was deemed safe to do a complete excision. At best this case would have been a very hazardous risk but it was undoubtedly an error of judgment to attempt a radical operation so soon after an acute exacerbation of the hyper-thyroidism. In our operations on the thyroid we have followed the technic outlined in a previous paper⁷ on the subject.

DEATHS.

Of the 561 patients admitted for treatment 20 died, a mortality of 3.6%.

These deaths may be conveniently divided into several groups as follows:

- 1st. Cases properly considered as hopeless from the first.
- 2nd. Bad risks which possibly could have been saved by better surgical judgment.
- 3rd. Deaths due to shock.
- 4th. Deaths due to accidental causes.

I. Cases hopeless from the first:

Case I. Portal pyaemia with abscess filling all large hepatic branches of portal vein. (Autopsy.) Exploratory operation to confirm diagnosis of portal pyaemia. Operation had no effect on course of disease.

Case II. Septicaemia with acute diffuse hepatitis. (Autopsy.) Exploratory Laporatomy. No effect on course of disease.

Case III. General peritonitis following rupture of undiagnosed appendicular abscess. Moribund on admission. Simple drainage operation. (See under acute appendicitis.)

Case IV. Enormous hypernephroma with occlusion of vena cava. Exploratory operation. Severe haemorrhage during course of exploration necessitated removal of greater portion of growth. Death from shock 5 hours after operation.

Case V. Sarcoma of Antrum of Hymore with secondary involvement of base of skull. Superior maxilla resected before secondary involvement could be made out. Death from pulmonary embolus.

⁷ STANTON, E. MACD. The Surgical Treatment of Goiter. *Albany Med. Ann.*, April, 1911.

Case VI. Late general peritonitis following free perforation of gall bladder through upper surface of liver. Old lady, practically moribund on admission. Exploratory operation with drainage.

Case VII. Recto peritoneal cellulitis following rupture of a diverticulum of the bladder. An old woman whose condition was so bad as not to warrant any operation. Diagnosis confirmed at autopsy.

II. Bad risks which possibly could have been saved by better surgical judgment:

Case VIII. Traumatic rupture of intestines and diaphragm. Perforations of intestines closed at first operation. Four weeks later developed intestinal obstruction at site of diaphragmatic hernia with a complicating empyema. Died after secondary operation to relieve intestinal obstruction.

Case IX. Perforated gastric ulcer in a tramp discharged as a malingerer from a hospital in a neighboring city and readmitted on the same day to the Physician's Hospital, Schenectady. On admission he was complaining of very severe abdominal pain but with normal pulse and temperature. No adequate physical examination was made until 24 hours later when he was found to have unmistakable evidences of general peritonitis. Immediate operation now showed a large perforation of a duodenal ulcer with late general peritonitis. The perforation was closed and drainage provided but death occurred in a few hours. Had not at least four physicians who questioned this patient on the day of his admission to the hospital all thought him to be a malingering dope fiend he might have been operated on the first day of his perforation and probably saved.

Case X. Exophthalmic goiter. Death due to post operative hyperthyroidism. (See under Goiter.)

III. Deaths due to shock:

Case II. Inoperable hypernephroma—death from shock after exploratory operation. (See under hopeless cases.)

Case XI. Pancreatic abscess. The upper abdomen was filled with an extremely tense retroperitoneal, fluctuating mass. General peritoneum protected with gauze pads and abscess opened by blunt dissection through gastro-colic amentum. Large amount of dark reddish, grumous, distinctly purulent material under great tension evacuated. The evacuation of this abscess was immediately followed by profound collapse which increased until death 4 hours later.

Case XII. Perineal prostatectomy dying of shock 24 hours after operation.

IV. Deaths due to accidents:

Case XIII. Appendicular abscess, abdominal drainage removed in some unknown manner soon after the operation. (See under acute appendicitis.)

Case XIV. Exploratory gastrotomy with secondary haemorrhage occurring during night following the operation. Haemorrhage not reported at the time. This patient could probably have been saved had the house officer promptly recognized the gravity of the accident.

Case XV. Old pelvic abscess with fistula into sigmoid. Abscess drained through a median suprapubic incision. Convalescence was uneventful until the 6th day when the gauze packing and rubber tubes were removed and a single rubber tube inserted. A few hours later an S. S. enema was ordered by an interne who was temporarily substituting on this service and who was entirely unfamiliar with the patient's condition. This enema was immediately followed by agonizing pain, profound collapse, general peritonitis and death.

Case XVI. Pulmonary embolus following a vaginal hysterectomy.

Case XVII. Caesarean section (Parro operation). Uneventful convalescence until 2 days after operation when patient was found out of bed and walking around. After this exertion the patient began to fail rapidly and died 10 hours later. No autopsy permitted. No evidence of secondary haemorrhage or infection. Cause of death probably exhaustion and shock resulting in part at least from the physical exertion incident to her getting out of bed.

Case XVIII. Pyorectomy for carcinoma died of secondary haemorrhage from a vessel situated in the head of the pancreas. At the operation it was found necessary to shave off a part of the head of the pancreas in order to remove the new growth. Convalescence was essentially uneventful until the morning of the 14th day. As the patient was planning to leave the hospital for his house he was seized by a sudden, severe abdominal pain, followed by pallor, collapse and death within half an hour of the first onset of trouble. Autopsy showed a haemorrhage from a vessel in the head of the pancreas the point of origin of the haemorrhage being surrounded by a small area of necrosis. The operative suture lines in the stomach were perfectly healed and there were practically no adhesions resulting from the operative work.

Case XIX. Late thrombosis of the internal carotid following a Crile block dissection for cancer of the cheek and cervical lymph nodes. In this case the external carotid had been ligated proximal to the point where the superior thyroid branch is given off. The ligation thrombus extended down to and finally involved the internal carotid. As this same accident has been reported by a number of other surgeons one should always, if possible, ligate the external carotid distal to the point at which the superior thyroid branch is given off. A clot extending back to the first collateral branch would thus not endanger the internal carotid.

Case XX. Suprapubic prostatectomy, during what appeared to be an uneventful convalescence from the operation this patient developed a virulent pharyngeal diphtheria and died apparently of the diphtheria in spite of the early and vigorous use of anti-toxine.

DIAGNOSIS AND TREATMENT.

	Cases treated	Operated	Not operated	Recovered	Died
I. NERVOUS SYSTEM.					
Trifacial neuralgia. Resection of infraorbital and inferior dental nerves and plugging of foramina.....	1	1	..	1	..
Malperforant ulcers. Curetted.....					
4	4	..	4	..	..
II. CIRCULATORY SYSTEM.					
Varicose veins of legs. Babcock-Schede operation.....	4	4	..	4	..
III. RESPIRATORY SYSTEM.					
Stone impacted in nostril. Extracted.....	1	..	..	1	..
Sinus antrum of Hymore (post oper.). Closed.....	1	1	..	1	..
Sarcoma of antrum (see under tumors). .....	..	..	..	..	..
Acute empyema. Resection of rib.....	2	2	..	2	..
IV. DIGESTIVE SYSTEM.					
Double hare lip. Owen operation.....	1	1	..	1	..
Appendicitis—acute:					
a. Acute diffuse, operated during first twenty-four hours of attack.....	13	13	..	13	..
b. Acute diffuse, operated during second day of attack.....	11	11	..	11	..
c. Acute diffuse, operated during third day of attack; no clinical evidence of noteworthy peritonitis.....	3	3	..	3	..
d. Late cases with marked peritoneal involvement. Ochsner treatment until subsidence of acute symptoms.....	6	6	..	6	..
e. Late cases with localized abscesses at time of admission to hospital.....	5	5	..	4	1
f. Mild acute cases. Ochsner treatment.....	2	..	2	2	..
g. Rupture of old undiagnosed appendicular abscess into general peritoneal cavity (moribund on admission).....	1	1	..	..	1
Appendicitis—chronic: ¹					
<i>Surgery, June, 1911, p. 813.</i>					
a. Definite symptoms and a definite lesion (obstruction) of appendix found at operation.....	8	8	..	8	..
b. Pain in right lower quadrant but not typical appendix symptoms. Long caecum, Jackson's membrane or no noteworthy lesion found at operation. Appendix negative.....	8	8	..	8	..
Appendectomy during course of other operations.....	..	62	..	..	..
Stomach and Duodenum:					
Acute perforation of duodenal ulcer. [Closed].....	1	1	..	1	..
Perforated ulcer with late general peritonitis.....	1	1	..	..	1
Pyloric obstruction—duodenal ulcer. Posterior gastroenterostomy.....	4	4	..	4	..
Pyloric obstruction—adhesions. Posterior gastroenterostomy.....	1	1	..	1	..
Exploratory gastrostomy—haemorrhage.....	1	1	..	..	1
Carcinoma of stomach (see under tumors). .....	..	..	..	..	..
Liver:					
Ruptured liver, cavity packed to control hemorrhage.....	1	1	..	1	..
Adhesions loosened between liver and intestines.....	1	1	..	1	..
Portal pyaemia—multiple liver abscesses. Exploratory laparotomy.....	1	1	..	..	1
Acute hepatitis with multiple focal areas of necrosis. Exploratory laparotomy.....	1	1	..	..	1
Acute hepatitis—septicaemia. Exploratory laparotomy.....	1	1	..	1	..
Gall bladder:					
Gall stones:					
Cholecystotomy.....	16	16	..	16	..
Cholecystectomy.....	1	1	..	1	..
General peritonitis due to perforation of gall bladder. Simple drainage of peritoneal cavity—moribund on admission.....	1	1	..	..	1
Cholecystitis—cholecystostomy.....	3	3	..	3	..
Pancreas:					
Pancreatic abscess drained.....	1	1	..	..	1

DIAGNOSIS AND TREATMENT.

	Cases treated	Operated	Not operated	Recovered	Died
Intestines:					
Rupture of intestines and diaphragm. Sutured intestines four weeks later operated for strangulated diaphragmatic hernia, empyema,	1	1	—	1	1
Ruptured diverticulum of sigmoid. Closed perforation	1	1	—	1	—
Tuberculosis of caecum. Excised caecum	1	1	—	1	—
Post operative fecal fistula. Closed	1	1	—	1	—
Carcinoma of intestines (see under tumors).					
Rectum and anus:					
Haemorrhoids. Clamp and cautery	16	16	—	16	—
Fissure in ano. Incised sphincter	3	3	—	3	—
Fistula in ano. Incised	5	5	—	5	—
Miscellaneous abdominal operations:					
Intra abdominal abscess developing four years after appendectomy. Drained	1	1	—	1	—
Abscess of spleen following splenic infarct. Drained	1	1	—	1	—
Removal of silver wire sutures	1	1	—	1	—
V.a. GENITO URINARY SYSTEM.					
Renal calculus. Pelviotomy, closed with fatty fascia flap ¹	2	2	—	2	—
Renal calculus. Nephrectomy	1	1	—	1	—
Ureteral calculus. Ureteroectomy	1	1	—	1	—
Ureteral obstruction due to tubercular retroperitoneal lymph nodes. Excised tubercular glands	1	1	—	1	—
Ureteral obstruction. Nephrectomy	1	1	—	1	—
Extrrophy of bladder. Diakonow ² operation	1	1	—	1	—
Enlarged prostate. Suprapubic prostatectomy	1	1	—	0	1
Enlarged prostate. Perineal prostatectomy	2	2	—	1	1
Large prostatic calculus. Superpubic enucleation	1	1	—	1	—
Cellulitis following rupture of bladder diverticulum	1	—	1	—	1
Stricture urethra ³ internal urethrotomy	1	1	—	1	—
Embolic abscess of testicle. Incised	1	1	—	1	—
Necrosis of epididymis following injury. Excised epididymis	1	1	—	1	—
Tuberculosis of seminal vesicle with large pelvic abscess. Drained	1	1	—	1	—
Phimosis. Circumcision	3	3	—	3	—
V.b. GYNECOLOGICAL.					
Lacerations and malpositions following child birth	27	27	—	20	1
Perineorrhaphy	—	—	—	—	—
Anterior colporrhaphy	—	—	—	7	—
Amputation of cervix	—	—	—	14	—
Cauterization of cervix	—	—	—	2	—
Intra-abdominal shortening of round ligaments	—	—	—	11	—
External Alexander	—	—	—	2	—
Ventral fixation	—	—	—	3	—
Tubes excised	—	—	—	0	—
Vaginal hysterectomy	—	—	—	1	—
Vaginal hysterectomy (pulmonary embolus)	—	—	—	1	—
Plastic on prolapsed urethra	—	—	—	1	—
Myoma uteri. Supra-vaginal hysterectomy	0	0	—	0	—
Myomectomy	2	2	—	2	—
Vaginal hysterectomy	1	1	—	1	—
Persistent uterine haemorrhage without fibroid or cancer:					
Supra-vaginal hysterectomy	1	1	—	1	—
Vaginal hysterectomy	2	2	—	2	—
Retroverted pregnant uterus. Adhesions holding uterus loosened	1	1	—	1	—
Caesarian section (Parro)	1	1	—	1	—
Cervical polyn. Cauterized	1	1	—	1	—
Obstructive dysmenorrhea. Pozzi operation	1	1	—	1	—
Polypoid endometritis. Curettage	5	5	—	5	—
Incomplete abortion. Curettage	15	15	—	15	—
Extra-uterine pregnancy. Excised one or both tubes	8	8	—	8	—
Ovarian cyst—unilocular. Excised tubes and ovaries	7	7	—	7	—
Ovarian cyst—follicular. Excised tubes and ovaries	1	1	—	1	—
Ovarian cyst—twisted pedicle. Excised	1	1	—	1	—

¹ MAYO, W. J., *Surg., Gyn. & Obst.*, April, 1912, pp. 363-365.² DIAKONOW, P. J., *Surg., Gyn. & Obst.*, 1918, VII, pp. 695-700.³ Does not include office cases.

DIAGNOSIS AND TREATMENT.

	Cases treated	Operated	Not operated	Recovered	Died
4					
Dermoid cyst of ovary. Excised.....	2	2	..	2	..
Tubercular peritonitis and salpingitis. Excised tubes and drained.....	1	1	..	1	..
Chronic pelvic inflammatory disease. Excised both tubes, one ovary and shortened round ligaments.....	19	19	..	19	..
Pyosalpinx—tubo-ovarian abscess—pelvic abscess:					
Excised both tubes and ovaries.....	4	4	..	4	..
Excised both tubes and one ovary.....	21	21	..	21	..
Simple drainage of abscess.....	1	1	..	1	..
Pan hysterectomy.....	1	1	..	1	..
Old pelvic abscess with fecal fistula.....	1	1	..	..	1
Excised infected Bartholins glands.....	4	4	..	4	..

VI. LYMPH NODES AND MISCELLANEOUS GLANDS.

Tonsils and adenoids:					
Tonsillectomy and removal of adenoids.....	44	44	..	44	..
Thyroid:					
Simple goiter.....	2	2	..	2	..
Exophthalmic goiter.....	4	4	..	3	1
Tubercular glands of neck. Excised.....	7	7	..	7	..
Tubercular glands of axilla. Excised.....	1	1	..	1	..

VII. SKELETAL SYSTEM.

Painful stump due to new formed bone from misplaced periosteum. Reamputation.....	1	1	..	1	..
Infected bone cyst of femur. Curetted and filled with Moerhoff plug.....	1	1	..	1	..
Osteomelitis (small bones). Sequestrotomy.....	3	3	..	3	..
Acute osteomyelitis of femur. Subperiostial resection of entire shaft between ephysis—Jones-Thomas splint.....	1	1	..	1	..
Chronic osteomyelitis of tibia. Sequestrotomy, filled cavity with Beck's paste.....	1	1	..	1	..
Alveolar abscess. Incised and drained.....	3	3	..	3	..
Necrosis of inferior maxilla. Sequestrotomy.....	1	1	..	1	..
Dentigerous cyst. Incised and curetted.....	1	1	..	1	..
Bone cyst of radius. Freely opened and cavity filled with Beck's paste.....	1	1	..	1	..
Sinus of ankle curetted.....	1	1	..	1	..
Tuberculosis of sternum. Subperiostial resection of sternum.....	1	1	..	1	..
Tuberculosis of ankle. Resection-arthrodesis.....	1	1	..	1	..
Tuberculosis of joints. Plaster of Paris casts.....	5	5	..	5	..
Spinal curvature. Plaster of Paris casts.....	1	1	..	1	..
Talipes equinus—post paralytic. Tenotomy and correction.....	1	1	..	1	..
Congenital club foot. Tenotomies, correction and plaster of Paris casts.....	1	1	..	1	..
Ganglion of wrist excised.....	1	1	..	1	..
Subcaracoid bursitis with adhesions. Adhesions broken. Goldthwait method.....	1	1	..	1	..

VIII. SKIN AND DERIVATIVES.

Congenital angioma, region of right knee. Excised.....	1	1	..	1	..
Naevus of chin. Excised.....	1	1	..	1	..
Oil burn of neck. Plastic operation.....	1	1	..	1	..
Skin graft.....	1	1	..	1	..
Ingrowing toe nail. Excised.....	3	3	..	3	..

IX. TUMORS.

Lipoma of back. Excised.....	1	1	..	1	..
Fibroma of penis. Excised.....	1	1	..	1	..
Fibroma of nose. Excised.....	1	1	..	1	..
Enchondroma of toe. Excised.....	1	1	..	1	..
Sebaceous cyst. Excised.....	7	7	..	7	..
Papilloma of ear. Excised.....	1	1	..	1	..
Branchial cleft cyst. Excised.....	1	1	..	1	..
Mycoma uteri (see under gynecological). Ovarian cyst (see under gynecological). Mixed tumor of parotid. Excised.....	1	1	..	1	..
Epulis lower jaw. Excised and curetted.....	1	1	..	1	..

DIAGNOSIS AND TREATMENT.

	Cases treated	Operated	Not operated	Recovered	Died
Carcinoma of					
Breast. Halsted-Handley operation.....	3	3	..	3	..
Breast recurrent in cervical lymph nodes. Excised.....	1	1	..	1	..
Stomach. Pylorectomy.....	3	3	..	2	1
Caecum. Excised.....	1	1	..	1	..
Caecum. Ilio-colostomy.....	1	1	..	1	..
Metastatic to inguinal lymph nodes. Exploratory incision.....	1	1	..	1	..
Cheek and cervical lymph nodes. Crile block dissection. Late thrombosis of internal carotid.....	1	1	..	..	1
Nose. Excised.....	1	1	..	1	..
Cheek. Excised.....	1	1	..	1	..
Lip. Excised.....	3	3	..	3	..
Hypernephroma. Excised.....	2	2	..	1	1
Sarcoma, anago of back. Palliative excision.....	1	1	..	1	..
Sarcoma. Spindle cell of antrum. Resection of superior maxilla—pulmonary embolus.....	1	1	..	..	1
X. INFECTIONS.					
Septic infections of extremities. Treated with beric acid packs and splints—localized abscesses drained.....	30	15	15	25	..
Suppuration of cervical lymph nodes following "septic sore throats." Incised and drained.....	5	5	..	5	..
"666" abscesses incised and curedtted.....	2	2	..	2	..
XI. TRAUMATISMS.					
Fractures of extremities.....	41	1	40	41	..
Fractures of skull.....	4	2	2	4	..
Phlebitis, post traumatic.....	1	..	1	1	..
Traumatic lacerations of soft tissues.....	22	..	22	22	..
Railroad crush of thigh. Amputation.....	1	1	..	1	..
Dislocations.....	13	..	13	13	..
XI.a. HERNIAS.					
Double inguinal hernia. Ferguson-Andrews operation.....	4	4	..	4	..
Single inguinal hernia. Ferguson-Andrews operation.....	13	13	..	13	..
Single femoral hernia. High ligation of sac.....	3	3	..	3	..
Ventral post operative hernia. Layer dissection and closed.....	4	4	..	4	..
Umbilical hernia. Mayo operation.....	2	2	..	2	..
Strangulated inguinal hernia. Ferguson-Andrews operation.....	2	2	..	2	..
Strangulated femoral hernia. Reduced and ligated sac.....	1	1	..	1	..
Strangulated umbilical hernia. Mayo operation.....	1	1	..	1	..
Tube and ovary incarcerated in obturator hernia. Excised tube and ovary, closed ring and applied omentum over opening.....	1	1	..	1	..
Totals.....	560	473	97	510	28
Less duplicates.....	8	8	..	8	..
	552	474	97	511	28

THE CHILD AND FRESH AIR.

Read at the New York State Teachers' Association, November 20, 1911.

BY HENRY L. K. SHAW, M. D.,

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The child and fresh air should be inseparable. When this fact is more generally realized we will have a stronger nation and a more virile race. The plea for pure air is not a modern fad. The oldest medical book in my library is a "Treatise on the Prevention of Diseases," written in 1783, in which is said: "Unwholesome air is a very common cause of disease. Few are aware of the dangers arising from it. People generally pay some attention to what they eat or drink, but seldom regard what goes into the lungs, though the latter proves often more suddenly fatal than the former."

There is urgent need that all who are responsible for the instruction of children should fully realize and understand the necessity for pure air. The benefits of the best designed school may be destroyed by the ignorance or selfishness of a teacher. The scholar should be taught both by precept and example the value of ventilation and the principles of hygiene.

It may not be out of place to briefly review some of the more important facts in the physiology of respiration.

The special organs in all vertebrates constructed to bring the blood into close proximity with the atmospheric air are called lungs. The air is carried to the lungs through the nose, pharynx, larynx of voice box, trachea or wind pipe, and the bronchial tubes. The bronchial tubes subdivide into smaller and smaller tubes until these reach the small lobules of the lungs. The lungs are divided into separate portions or lobes. Each of these is composed of minute parts called lobules and these are further subdivided by delicate partitions into air cells. In the adult the number of air cells is estimated at about seven hundred millions. The blood vessels of the lungs are spread out in an interlacing network around the air cells so that at least two sides of the blood vessels are exposed to the action of the air in the cells.

The maintenance of life is dependent on the continual absorption of oxygen and the elimination of carbon dioxide. The blood is the medium by which these gases are carried. It has been demonstrated that young children inhale more oxygen and exhale more carbon dioxide, relatively than adults. This is due to

the increased activity of cell life and of the blood and lymph circulation in the growing organism. In other words, it is more important for the young child to have an abundance of pure air than the adult.

We have referred to the composition of air as it enters the body. The composition is changed during the process of respiration. The expired air is heated by its contact with the interior of the lungs and is hotter than the inspired air. The amount of carbon dioxide is increased but the amount is subject to many variations. The oxygen is diminished proportionately to the increase in carbon dioxide. The most important change is that the quantity of organic matter in the breath is increased. The carbon dioxide in itself is not dangerous or deleterious to health except when its percentage is excessive and the oxygen correspondingly low. The real danger lies in the contamination by organic matter. The odor in badly ventilated rooms is due to the presence of these organic impurities. These impurities soon decompose and contain poisonous matter.

The Chicago Ventilation Commission agreed that in the present state of our knowledge it was impossible to designate the particular harmful agent or agents, in or associated with pure air but that carbon dioxide was not the agent of pollution of major importance.

The expired air is often the carrier of disease germs and it is probable that very many diseases are propagated in this way. This is especially true of tuberculosis. A careful survey of available statistics shows that during the school age the death rate from tuberculosis increases from 6.4 per cent to 18.6 per cent. in boys and from 7.4 per cent to 29.7 per cent in girls. This, however, gives us no adequate idea of the number of children infected, as a large number recover more or less completely. Comby, a distinguished French physician, detected evidences of tuberculosis in 65 per cent of the children under the age of ten years. Some of these children are infected on the street, in the home, etc., but the hard study and close confinement in badly ventilated school rooms lowers the child's natural powers of resistance and allows the germs to become active.

The high mortality among girls is of significance. When the boys are out of doors playing and working the girls spend more and more time indoors and are more exposed to infection. They do not get enough of fresh air.

Fresh air is a preventive of disease. There is no greater enemy to disease germs of every kind than oxygen. The proper and sufficient oxygenation of the blood means that enough oxygen is being distributed to the uttermost parts of the body to prevent the invasion of disease germs and infection. The amount of haemoglobin in the blood is an index of its oxygen-carrying ability. In a healthy child the normal percentage is calculated at 100. At the Providence Open Air School the average percentage was below 74 when the children entered in the fall. It had reached 84 at the close of the school year but fell again rapidly when the children returned to spend the summer in their homes in the crowded slums.

The fear of night air is a relic of barbarism. Someone has said that the only night air which is injurious is last night's—and the window should be opened to let it out. Before the discovery that mosquitoes alone can spread malaria people in Southern countries believed that night air caused that dread disease and would close and seal every window with the setting of the sun. Now we know that the night air is not harmful and can be breathed with impunity. Fresh cold night air is a stimulant and produces healthful and restful sleep and an awakening with renewed strength and vigor and a lessened susceptibility to disease.

Fresh air cures disease. As a remedial agency it is unsurpassed. Dr. Northrup of New York was looked upon as a fanatic a few years ago when he treated his cases of pneumonia in the open air in midwinter. He called it the "twenty-three hours treatment," meaning that the child was to be kept in the open air twenty-three out of twenty-four hours. His results were astounding and this is now the generally adopted mode of treatment. The curative effects of fresh free-flowing air in tuberculosis is well known. In whooping cough it is of more value than drugs and should be available and employed night and day. A couple of hours of "airing" in the morning and one hour in the afternoon is not sufficient—in fact, is woefully insufficient, as a curative agent.

A prominent New York physician recently said that whenever he was confronted by a case that was not doing well he felt the best thing to do was to place that child out in the open air. The pale anaemic child will take on a healthier hue when fresh air is administered in twenty-three hour doses and the prescribing of iron tonics will not be required.

For nearly a year past some of the sick babies at St. Margaret's Hospital have been kept out of doors all day in an open air ward. The results have been striking. The babies stopped losing weight and then began to gain. They took on color, slept better and cried less than the less fortunate babies in the indoor wards. The construction of a second open air ward is now under way, which shows that the hospital authorities are convinced of the value of the fresh air treatment.

Dr. Northrup in a recent article says that fresh air as the only medicine is being used in the treatment of many diseases which were treated ten years ago along entirely different lines and that the horror of fresh air in the sick room is passing.

It cannot be disputed that fresh air is essential to good health. Dr. Hay in the last number of the *Journal of the Outdoor Life* says that it dilates the air cells, increases chest expansion, ventilates and cleanses the innermost recesses of the lungs and diminishes the possibility of infection. The circulation of the blood is accelerated, the functional activity of the glands and various organs are increased and the renovation of the tissues more perfectly performed.

The ultimate result is stimulation of appetite, improved digestion, sleep is more restful, nervousness is overcome and the body weight is increased.

When the child reaches the age of seven years the State assumes charge of his education. He is obliged by law to attend school and the responsibility of his general welfare rests upon the authorities. They pay scant attention to the child's physical welfare. Here in Albany, for example, there is no medical inspection of the school children. The school rooms are overcrowded and inadequately ventilated. The child's health and happiness are secondary to iron clad school regulations. The greatest part of the day is spent in a stuffy schoolroom in acquiring a few grains of knowledge, for the young mind can only grasp a few facts at a time. The natural result is that we see healthy, robust and cheerful children rapidly become pale, flabby and nervous. Wackenheim says that in our large cities the early acquirements of school children consist chiefly of one or more of the infectious diseases and vicious habits of eating in the form of bolting the food and ingesting vast quantities of cheap and

harmful confectionery usually supplied by a dealer conveniently located next door to the school.

The Boards of Education are awakening to some sense of their responsibility. Compulsory education should not result in compulsory disease. The problem of better ventilation is being studied and open air schools are being established for the more delicate children. In 1904 there was only one open air school in America, now there are thirty-five. Your visit to Albany will not be complete unless a visit is made to our open air school. This school has now entered upon its second year and has accomplished even more than was expected. There is only room for twenty children and they are selected on account of their poor physical condition. Children with active tuberculosis are not taken, but pale, undersized children of tuberculous parents are given preference. Each child on arriving in the morning receives a dish of cereal and milk. At noon they get a hearty meal, consisting of meat, potato, vegetable and dessert. A glass of milk is provided in the afternoon. A tooth brush is given each child which must be used twice a day and individual towels and soap are furnished. A trained nurse takes the temperature once a day and if any child has a fever he is at once sent to the school physician. The weight is taken once a week. The greatest individual gain for one month was seven pounds.

The time is fast approaching which every village, town and city will provide open air schools for its weak and sickly children. This is the age of the child and we should do all in our power towards giving him the "square deal."

Editorial

In cases of feigned sickness our doctor would describe the patient as suffering from *febris catharalis*, and sometimes allowed him to remain a week in the hospital. Every one laughed at this *febris catharalis*, for it was known to be a formula agreed upon between the doctor and the patient to indicate no malady at all. Often the robust invalid who abused the doctor's compassion remained in the hospital until he was turned out by force. Our doctor was worth seeing then. Confused by the prisoner's obstinacy, he did not like to tell

him plainly that he was cured and offer him his leaving ticket, although he had the right to send him away without the least explanation on writing the words, *sanat. est.* First he would hint to him that it was time to go, and then would beg him to leave.

*The House of the Dead,
or Prison Life in Siberia.*

FEDOR DOSTOIEFFSKY



When our honored professor of neurology began Dr. Hun's *Atlas of Diagnostic Neurology.* his work in Albany some thirty years ago he was told by his distinguished father there was need of a book on the semeiology of disease. Dr. Thomas

Hun had become especially proficient in the practice of neurology, and the community with which the family name has been so long identified has been singularly blessed in that two brilliant sons followed in his steps. The elder, the late Dr. Edward Hun, contributed to the literature of neurology several epochal studies which are still authoritative, notably that upon haematoma of the ear in the insane, and others upon the pathology of insanity. The younger, Dr. Henry Hun, now presents a monumental work on neurological diagnosis of marked originality.* It is not to be inferred that the career of the son has been shaped to the mere production of a book suggested by the father. Rather is the wisdom of the father revealed in directing the observation of the son to the most essential qualification of the physician—accuracy in diagnosis and analysis and interpretation of symptoms. It is the good fortune of the profession that the work of a life-time is thus epitomized for the use and instruction of all. As Dr. Hun states in his preface, the diagnosis of nervous diseases lends itself better than that of other diseases to exact analysis. The analytical scheme followed by him is based upon the availability of charts. In these charts the prominent symptoms are arranged either in groups or singly, and from this starting point their relations with other symptoms are shown, so that by a process of elimination the exact diag-

**An Atlas of the Differential Diagnosis of the Diseases of the Nervous System Analytical and Semeiological Neurological Charts.* By HENRY HUN, M. D., Professor of the Diseases of the Nervous System in the Albany Medical College, Member of the Association of American Physicians, the American Neurological Association, etc.; Author of "A Guide for American Students in Europe," "Syllabus of a Course of Lectures on the Diseases of the Nervous System," etc. The Southworth Company, Publishers, Troy, New York, 1913.

nosis is reached. For example, motor paralysis is thus analyzed in Chart X. Such paralysis indicates disease of the motor neurons, and the presence or absence of the reflexes indicates whether the lesion is peripheral or central. If the reflexes are absent the peripheral neurons are affected, and the examiner is then directed by the chart to determine whether there is muscular atrophy, whether there is a mixture of atrophy and apparent hypertrophy, and whether the initial symptom was paralysis or atrophy. Assuming that the case was one of initial paralysis followed by atrophy, attention is directed to the organic reflexes, and if these are unaffected and sensory disturbance is wanting, it is shown whether the lesion is in the lumbar region of the cord or in the peripheral nerves; the prevalence or presence of sensory symptoms will further show whether the lesion is in the mixed nerves or in the cranial nerves, or in the nerve nuclei; the associated symptoms are grouped, and at the end of the chart lead to the diagnosis of one of the class of flaccid paralyses, namely, injury or inflammation of a motor cranial nerve, or its nucleus, lead palsy, or acute anterior poliomyelitis. The conclusion is thus reached in a most direct manner, and the same method may be used with any other prominent manifestation as the starting point, as spasm, ataxia, pain, vertigo, anaesthesia, mental disorders, and the like.

A good illustration of the cleverness of differentiation may be seen in Chart XIII a, treating of Anarthria and Dysarthria. Dysarthria may be congenital, due to defective education, paralytic, associated with tremor and ataxia, or rigidity or spasm. With tremor and ataxia dysarthria may be "tremulous and slovenly, with evident mental deterioration." In such case, there are evidences of syphilis, as shown by the Argyll-Robertson phenomenon or lumbar puncture, restlessness, irritability, violence, apoplectiform and epileptiform attacks, childishness and steadily progressive dementia, giving a clinical synopsis of paresis. Or, on the other hand, dysarthria, tremor and ataxia may appear in a case with history, odor and appearance of alcohol, temporary symptoms and foolish speech and actions, suggesting alcoholism.

The presentation and condensation of the subject-matter in the form of charts requires some preliminary study for a clear comprehension of their meaning, but when this is once grasped

their use and efficiency in the difficult diagnosis of nervous diseases is surprising in its simplicity.

Although the diagnostic charts are the essential feature, the plan is further carried out in other directions. Following an Introduction and General Key, there are three Parts. Part One, consisting of nine charts, is given to Semeiology. This includes case-taking; the analysis of subjective symptoms; the semeiology of disordered mental activity, of disordered motor activity, of disordered reflex activity, of disordered sensory activity; electrical examination; examination of the cerebro-spinal fluid; special syndromes and anatomical terms. Part Two consists of ten charts upon analytical diagnosis, already described, and Part Three treats of localization, in the spinal cord and brain, respectively, and from symptoms of paralysis or spasm. The book is liberally illustrated, and there are fifteen pages of plates. The index is most voluminous and complete, comprising twenty-eight double-columned pages.

The peculiar characteristic of this book is that it gives to the student or physician a key by which, in a comparatively easy manner, from one or more important symptoms, he may arrive at a diagnosis. It also has the advantage that it divides the diseases into groups, the members of which have a definite relationship with each other, so that in using the charts, the student is constantly catching glimpses of the natural relationships between the different diseases of the nervous system.

Dr. Hun's book is unique. It represents years of observation and strictly scientific and analytical methods of thought. It is a concise statement of established facts and of the relations of these facts to one another. Its two hundred and ninety beautifully printed quarto pages stand for several years—six, we are told—of concentrated application in its making. The physicians who have benefited by Dr. Hun's lectures in the Albany Medical College, the students who are now in his classes, the colleagues who are associated with him in daily work, will share the satisfaction of the author in the final accomplishment of this undertaking, justifying, as it does, their admiration of a teacher and leader in medical thought. Dr. Hun's *Atlas* is the greatest literary achievement of Albany Medicine.

Public Health

Edited by Joseph D. Craig, M. D.

ABSTRACT OF VITAL STATISTICS, OCTOBER, 1912.

DEPARTMENT OF HEALTH, ALBANY, N. Y.

Deaths.

Consumption	16
Typhoid fever	2
Scarlet fever	0
Measles	1
Whooping-cough	0
Diphtheria and Croup.	2
Grippe	0
Diarrheal diseases	5
Pneumonia	7
Broncho-pneumonia	1
Bright's disease	19
Apoplexy	8
Cancer	12
Accidents and violence.	12
Deaths over 70 years.	32
Deaths under 1 year.	15
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Total deaths	146
Death rate	17.18
Death rate less non-residents.	14.59

Deaths in Institutions.

	Resident.	Non-Resident.
Albany Hospital	6	7
Albany Orphan Asylum.	0	0
Child's Hospital	0	0
County House	2	1
Home for the Friendless.	0	0
Homeopathic Hospital	7	3
Hospital for Incurables.	1	1
House of Good Shepherd.	0	0
House of Shelter.	1	0
Little Sisters of the Poor.	2	0
Public places	2	2
Penitentiary	0	0
Sacred Heart Convent.	0	0
St. Margaret's House.	0	3
St. Peter's Hospital.	6	4
Austin Maternity Hospital.	0	0
Albany Hospital, Tuberculosis Pavilion.	2	1
Labor Pavilion	0	0
<hr/>		
Totals.	29	22

Births.....	153
Still births	4
Premature births	4

BUREAU OF CONTAGIOUS DISEASE.
Cases Reported.

Typhoid fever	10
Scarlet fever	2
Diphtheria and croup.....	48
Chickenpox	0
Measles	18
Whooping-cough	0
Consumption	34
Spinal meningitis	1
Total.....	113

Contagious Disease in Relation to Public Schools.

	REPORTED D. S. F.	DEATHS. D. S. F.
Public School No. 3.....	1 ..	.. ..
Public School No. 7.....	1 ..	.. ..
Public School No. 8.....	3 ..	.. ..
Public School No. 17.....	1 ..	.. ..
Public School No. 20.....	4 ..	.. ..
Public School No. 21.....	1 ..	.. ..
Public School No. 22.....	4 ..	.. ..
St. Joseph's Academy.....	3 ..	.. ..
St. Patrick's School.....	3 ..	.. ..
Holy Cross School.....	2 ..	.. ..
Our Lady of Angels School.....	2 1	.. ..
Cathedral School	1 ..	.. ..
Number of days quarantine for diphtheria:		

Longest..... 23 Shortest..... 4 Average..... 11 13/21

Number of days quarantine for scarlet fever:

None.

Fumigations:

Houses.....	39	Rooms.....	149
Cases of diphtheria reported.....			48
Cases of diphtheria in which antitoxin was used.....			46
Cases in which antitoxin was not used.....			2
Deaths after use of antitoxin.....			2

BENDER LABORATORY REPORT ON TUBERCULOSIS.

Positive	11
Negative	17
Total.....	28

Living cases on record October 1, 1912.....	300
Cases reported during October:	
By card	19
Dead cases by certificate.....	6
	— 25
Total.....	325
Dead cases previously reported.....	10
Dead cases not previously reported.....	6
Duplicates	0
Recovered	0
Removed	5
	— 21
Living cases on record November 1, 1912.....	304
Total tuberculosis death certificates filed during October.....	16
Out of town cases dying in Albany:	
Albany Hospital	I
Albany Hospital Camp.....	I
County Hospital	I
	— 3
Net city tuberculosis deaths.....	13

REPORT OF VISITING TUBERCULOSIS NURSE.

Number of new cases assigned.....	10
Number of old cases investigated.....	70
	—
Total number of cases investigated.....	
Total number of cases remaining under supervision.....	28

Disposition of New Cases.

Referred to Albany Guild Nurse.....	3
Under care of private nurse.....	1
Patient refused to have nurse.....	3
Died	1
Lost.....	2
Number of visits.....	50

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	39
Initial negative	142
Release positive	25
Release negative	46
Failed	10
Total.....	262

Test of sputum for tuberculosis:	
Initial positive	13
Initial negative	21
Failed	1
Total.....	35

BUREAU OF MARKETS.

Market inspections	93
Public market inspections.....	17
Fish market inspections.....	5
Rendering plant inspections.....	3
Slaughter house inspections.....	1
Hide house inspections.....	4
Pork packing house inspections.....	4
Fish peddler inspections.....	1

MISCELLANEOUS.

Mercantile certificates issued to children.....	17
Factory certificates issued to children.....	7
Children's birth records on file.....	24
Number of written complaints of nuisances.....	47
Privy vaults	5
Closets	7
Plumbing	10
Other miscellaneous complaints.....	25
Cases assigned to health physicians.....	51
Calls made	120

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR OCTOBER, 1912.—Number of new cases, 144; classified as follows: Dispensary patients receiving home care, 17; district cases reported by health physicians, 6; charity cases reported by other physicians, 41; moderate income patients, 72; metropolitan patients, 8; old cases still under treatment, 74; total number of cases under nursing care during month, 218. Classification of diseases for the new cases: Medical, 37; surgical, 5; gynecological, 3; obstetrical under professional care, mothers 38, infants 38; eye and ear, 0; skin, 2; throat and nose, 0; dental, 0; infectious diseases in the medical list, 21; surgical list, 0. Disposition: Removed to hospitals, 7; deaths, 0; discharged cured, 103; improved, 10; unimproved, 6; number of patients still remaining under care, 83.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 1; students in attendance, 5; nurses in attendance, 4; patients carried over from last month, 0; new patients during month, 6; patients discharged, 4; visits by head obstetrician, 1; visits by attending obstetrician, 0; visits by students, 28; visits by nurses, 30; total number of visits for this department, 59.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,143; for professional supervision of convalescents, 605; total number of visits, 1,748; cases reported to Guild by three health physicians and thirty-nine other physicians; graduate nurses 9, and pupil nurses 8 on duty.

Dispensary Report.—Number of clinics held, 83; new patients, 172; old patients, 244; total number of patients treated during month, 416. Classification of clinics held: Surgical, 8; nose and throat, 7; eye and ear, 17; skin and genito-urinary, 6; medical, 12; lung, 11; dental, 1; nervous, 0; stomach, 1; children, 12; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—A regular meeting of the Medical Society of the County of Albany was held on Wednesday evening, November 20, 1912, at the Albany Medical College. The following program was presented: "The Treatment of Exophthalmic Goitre with High Frequency Currents," Dr. William J. Lewi; "The Treatment of Uric Acid Diathesis by Electricity," Dr. E. A. Bartlett; "Electro Diagnosis," Dr. J. Montgomery Mosher; "Stereoscopic Radiography," with lantern demonstration, Dr. John M. Berry.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady, was held at the County Court House, Tuesday evening, November 19, 1912, at 8.30 o'clock. Dr. J. B. Garlick read a paper on "Backache" and Dr. R. C. Keigher presented a paper on "Enteroptosis."

CLINICAL CONGRESS OF SURGEONS.—The third annual session of the Clinical Congress of Surgeons of North America was held at the Waldorf-Astoria, New York City, November 11 to 16. More than three thousand physicians and surgeons attended.

Nine hundred and ninety-five clinics and a large number of laboratory demonstrations were held in public and private hospitals of Manhattan, Bronx and Brooklyn. Six literary sessions were arranged for the evenings.

On Monday, November 11: "Treatment of Hepatic Cirrhosis," President, Dr. Edward Martin, Philadelphia, Pa.; "Surgery of the Spleen," Dr. William J. Mayo, Rochester, Minn.

On Tuesday, November 12th: "Anesthesia and Anoci-Association," with lantern demonstration, Dr. George W. Crile, Cleveland, Ohio; "Indications and Results of Excision of the Posterior Spinal Nerve Roots in Man," Dr. Otfried Forester, Breslau, Germany; "Problems and Procedures in the Surgery of the Spinal Canal," Dr. Charles H. Frazier, Philadelphia, Pa.: "Surgery of the Spinal Cord from the Neurological Standpoint," Dr. D'Orsay Hecht, Chirago, Ill.

On Wednesday, November 13th: "A description of the Enteroptotic Woman," Dr. Richard R. Smith, Grand Rapids, Michigan; "Chronic Intestinal Stasis," Dr. W. Arbuthnot Lane, London, England; "Summary of Results in Gastro-Intestinal Stasis," Dr. John G. Clark, Philadelphia, Pa.; "Replacing and Retaining Operations in the Treatment of Gastric and Intestinal Stasis," Dr. Robert C. Coffey, Portland, Oregon; "Orthopedic Principles in the Treatment of Enteroptosis and Chronic Intestinal Stasis," Dr. Joel E. Goldthwaite, Boston, Mass.

On Thursday, November 14th: "Problems of Obstetrical Practice," Dr. W. W. Chipman, Montreal, Canada; "Radical Operation for Cancer of the Uterus. Viewed from the Standpoint: (a) Permanent Cure; (b) Temporary Relief," Dr. Thomas S. Cullen, Baltimore, Md.; "The Wertheim Operation," Dr. Wilhelm Weibel, Vienna, Austria, first assistant to Prof. Wertheim; "The Cautery in the Radical Treatment of Cancer of the Cervix," Dr. X. O. Werder, Pittsburgh, Pa.; "Vaginal Hysterectomy by Electro-cautery in Early Cervix Cancer," Dr. Robert L. Dickinson, Brooklyn, N. Y.; "Extended Radical Operation through the Vagina for Uterine Cancer," Dr. George Gellhorn, St. Louis, Mo.; "Bronchoscopy (Esophagoscopy and Gastroscopy)" with lantern demonstration, Dr. Chevalier Jackson, Pittsburgh, Pa.; "Extirpation of the Lachrymal Sac," Dr. Myles Standish, Boston, Mass.; "Otitic Meningitis, the Indication of and the Operative Treatment for," Dr. Ewing W. Day, Pittsburgh, Pa.

On Friday, November 15th: "The Treatment of Lateral Curvature of the Spine," Dr. E. G. Abbott, Portland, Me.; "Surgery of the Bones and Joints," Dr. John B. Murphy, Chicago, Ill.

HARRIET LANE HOME FOR INVALID CHILDREN, JOHNS HOPKINS UNIVERSITY, BALTIMORE MD.—This new hospital, the children's department of Johns Hopkins University, was formally dedicated and opened, November 20, 1912. Dr. Howland is in charge and Dr. K. D. Blackfan (A. M. C. '05), resident physician.

LELAND STANFORD JUNIOR UNIVERSITY.—The dedication of the Lane Medical Library of the Leland Stanford Junior University took place, Sunday, November 3, 1912, at 2.30 p. m., at San Francisco, Cal.

YONKERS OPENS TUBERCULOSIS HOSPITAL.—The new Municipal Tuberculosis Hospital in the Nepera Park section of Yonkers has been formally opened. The building is on a five acre site given by Alexander Smith Cochran.

HEALTH WEEK IN ALBANY.—Special exercises were given on October 23, at which addresses were made on "A City Beautiful" and "A City Clean." October 24th was set apart as Medical Day. The exhibit of the state at the International Congress on Hygiene and Demography, was shown at the State Education building during the week.

CONVENTION OF THE AMERICAN ASSOCIATION OF PROGRESSIVE MEDICINE.—The second annual convention of the American Association of Progressive Medicine will be held at Poughkeepsie, N. Y., September 2, 3, 4, 5, 1913.

ARMY MEDICAL CORPS EXAMINATION.—The Surgeon General of the Army announces that preliminary examinations for the appointment of first lieutenants in the Army Medical Corps will be held on January 20, 1913, at points to be hereafter designated.

Full information concerning these examinations can be secured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation are that, the applicant shall be a citizen of the United States, shall be between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, shall be of good moral character and habits, shall have had at least one year's hospital training as an interne, after graduation. The examinations will be held simultaneously throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the travelling expenses of applicants as much as possible.

The examination in subjects of general education (mathematics, geography, history general literature and Latin), may be omitted in the case of applicants holding diplomas from reputable literary or scientific colleges, normal schools or high schools, or graduates of medical schools which require an entrance examination satisfactory to the faculty of the Army Medical School.

In order to perfect all necessary arrangements for the examination, applications must be completed and in possession of the Adjutant General at least three weeks before the date of examination. Early attention is therefore enjoined upon all intending applicants. There are at present thirty-five vacancies in the Medical Corps of the Army.

PERSONALS.—Dr. THOMAS H. MANN (A. M. C. '70), is now at Bolton, Conn.

—Dr. HAMILTON HOLLIDAY (A. M. C. '84), is now at Fort Edward, N. Y.

—Dr. GEORGE OTT (A. M. C. '94), is now at 94 Tremont St., Boston, Mass.

—Dr. EDWARD N. K. MEARS (A. M. C. '95), is now at Lowville, N. Y.

—Dr. HARRY F. HULL (A. M. C. '99), is now at the Naval Station, Newport, R. I.

—Dr. JOHN P. FABER (A. M. C. '05), is now at 704 Union St., Schenectady, N. Y.

—Dr. EUGENE G. STEELE (A. M. C. '06), is now at Plentywood, Montana.

—Dr. LOUIS H. GAUS (A. M. C. '07), is now at 304 Hamilton St., Albany, N. Y.

—Dr. TIFFANY LAWYER (A. M. C. '07), has removed from 64 Dove St., to 192 Jay St., Albany, N. Y.

—Dr. ROBERT S. LIPES (A. M. C. '07), is now at Stottville, N. Y.

—Dr. HARRY H. DRAKE (A. M. C. '09), has removed from 547 to 525 Clinton Ave., Albany, N. Y.

—Dr. EUGENE F. CONNALLY (A. M. C. '10), is practicing at White-hall, N. Y.

The present address of the following members of the Alumni is unknown; will be glad to receive information concerning them.

- Dr. ROBERT A. WALKER (A. M. C. '84).
 - Dr. CHARLES BRADLEY (A. M. C. '87).
 - Dr. CHARLES W. SNYDER (A. M. C. '89).
 - Dr. WALTER M. FLEMING (A. M. C. '91).
 - Dr. EDWARD L. JOHNSON (A. M. C. '91).
 - Dr. JOSEPH A. DESOBE (A. M. C. '99).
 - Dr. HOWARD A. LAMOURE (A. M. C. '00).
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DIED.—Dr. HAMBLIN B. MABEN (A. M. C. '57), of Kingston, N. Y., died at his home in that city, October 15, aged 79.

—Dr. JAMES WARWICK (A. M. C. '77), died at Clinton, Mass.

—Dr. CHARLES F. HUDDLESTON (A. M. C. '79), died at his home in Chicago, Ill., November 11, 1912.

—Dr. HEYMACK H. LOUSSARARIAN (A. M. C. '00), died in 1903.

In Memoriam

HAMBLIN B. MABEN, M. D.

Dr. HAMBLIN B. MABEN, who died at his home in Kingston, N. Y., October 15, 1912, was born at Halecott Center, Greene County, N. Y., on March 27, 1833, and was the son of Benjamin and Diana Maben. His father was of Scotch descent and his mother French. Dr. Maben was six years of age at the time of his father's death and soon after was placed in a private school at Lysander, Onondaga County, N. Y. When he had reached the age of eleven years he was supporting himself. During the winter months he found time to attend the district school. After a time he began to teach school during the winter and also attended the old Binghamton Academy and the Herkimer Literary Institute, Greene County, in the fall and spring terms. At the age of twenty-one years he took up the study of medicine with the Hon. O. M. Allaben, M. D., of Margaretville, Delaware County, and three years later he graduated from the Albany Medical College in the class of 1857.

He started his professional career in Ilion, N. Y., where he built up a very large practice. He acted as an army surgeon at the David's Island Hospital during the year 1864. In the year 1883 he took a special course in gynecology in the New York Post-graduate School as his practice was principally with the diseases of women. He went to Kingston from Ilion in June, 1885, and soon became one of the most foremost physicians in the eastern part of New York State. He was a member of the Ulster County Medical Association, Broome County Medical Association, the Oneida County Medical Society and the Herkimer County Society. He was once a delegate to the State Medical Society and the American Medical Association. He served as president of the Physicians' Association of Kingston and of the Alumni Association of the

Albany College. He was a strong member of the Democratic party and held several public offices, including member of the board of education, village trustee and supervisor of the town of German Flats. Twice he was the nominee of the Democratic party for the Assembly. He has been very prominent in his profession in Ulster County and through this part of the State.

Dr. Maben was married three times. His first wife was Miss Carrie Lott, of Binghamton. She died in 1874, leaving one son, William. Dr. Maben's second wife was Miss Jennette C. Winslow, daughter of the late John Winslow, of Watertown, whom he married in 1876. She passed away September 25, 1898. His widow was Miss Jennie McKinley Wood, of Kingston, who married Dr. Maben January 8, 1903.

Dr. Maben was a member of Kingston Lodge, No. 10, F. & A. M., which lodge he joined in the year 1889. He had an attack of acute indigestion a few days before his death, which was caused by valvular disease of the heart, complicated with fatty degeneration and debility. Dr. Maben was of a genial and kindly disposition and held in high esteem by all with whom he came in contact in his daily walk and conversation and his pleasant face will be missed. He was a man who did much during his life of benefit to others.

Dr. Maben was an enthusiastic and loyal alumnus of the Albany Medical College, for which he always felt a deep affection. He trained six students for the college, all of whom became highly honored members of the profession. His presidential address to the Alumni Association at the meeting of 1898 was a model of retrospect and of philosophy gained as the reflections of a long and practical life.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic) for 1911. Octavo of 603 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$5.50 net.

In this volume are collected all the papers prepared and published by the members of the Mayo Clinic during the year 1911. To this volume there are twenty-three contributors and it contains fifty-five papers, some of them accompanied by one or more excellent illustrations. As usual, the alimentary tract receives the most attention, there being nineteen papers devoted to the diseases and treatment of this tract. There are one paper on Hernia and seventeen papers on the Genito-Urinary System. In this last group of papers an increasing amount of attention is paid to the diagnosis and treatment of surgical lesions of the kidney. There are four papers on the Ductless Glands, three papers on the Thorax and Extremities, three on the subject of Technic and some general papers. The volume closes with a memorial to Dr. William W. Mayo, in which appears a brief sketch of his life and manifold activities.

The volume is provided with a most carefully prepared index, and is so arranged as to make it very easy to locate any special feature of any paper that may be desired. Like the other volumes which have preceded it, this is a valuable addition to the literature of surgery and presents another chapter of the wonderful activities of this great Clinic. These papers make most interesting and instructive reading for any one engaged in either medicine or surgery, and it is to be hoped that each year will see a new volume added to this already valuable collection.

A. W. E.

Operative Obstetrics, including the Surgery of the Newborn. By EDWARD P. DAVIS, M. D., Professor of Obstetrics, Jefferson Medical College, Philadelphia. Octavo volume of 483 pages, with 264 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$5.50 net.

The author has divided the work into four parts.

Part 1 is devoted to the Surgery of Pregnancy; wherein are considered the artificial means of emptying the uterus before term and the various pathological conditions (*e. g.*, those of the appendix, gall-bladder and rectum) influenced by pregnancy and the methods of treatment to be applied.

To Part 2, the Surgery of Labor, one-half of the work of 460 pages is devoted. Every method of terminating full-term labor is fully described. The subject discussed at greatest length is delivery by abdominal section.

Part 3 is devoted to the Surgery of the Puerperal Period, and Part 4 to that of the New-Born.

Obstetrical anaesthesia and the technique of obstetric operations are among topics to a discussion of which the introductory pages are devoted.

Paper and type are of superior quality. Extensive lists of references appended not only to chapters but also scattered throughout the work make it complete. The writer's style, the profuse illustrations, many of which are diagrammatic and so particularly suited to illustrate points in obstetric operative procedure, and the many important though uncommonly-considered topics discussed make the work interesting. As a "concise statement of methods of operating in obstetrics" the book is invaluable to student, general practitioner and specialist.

P. T. H.

A Reference Handbook of Obstetric Nursing. By W. REYNOLDS WILSON, M. D., Visiting Physician to the Philadelphia Lying-in Charity; Member of the American Pediatric Society. Second Revised Edition. 32mo. of 256 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Flexible Leather, \$1.25 net.

The second edition of this hand-book of 240 pages, which is "designed to supplement the practical work of the hospital bed-side," presents in concise and attractive form the essentials of the care to be given the

mother during pregnancy, labor and the puerperium; to that of the child about 60 of its pages are devoted.

Works of this kind enable the nurse to become a more intelligent observer of the phenomena of parturition and consequently of greater service to both physician and patient.

Additional commendable features of this particular work are its convenient size, flexible leather cover and amplified index. P. T. H.

The Physicians' Visiting List for 1913. P. Blakiston's Son & Co., Philadelphia.

The sixty-second year of its publication finds the list attractively gotten up in leather, book-folder form, containing reference tables of value to the busy practitioner and ample memoranda pages under a variety of practical headings.

The book may be procured from stationer and druggist; the price varies with the number of patients' names to be carried, that of the list for twenty-five patients daily, being one dollar and a quarter net.

LARYNGOLOGY, RHINOLOGY AND OTOLOGY

Edited by Clement F. Theisen, M. D.

The Technic of the Examination of Esophageal Lesions.

H. S. PLUMMER. *Journal of the American Medical Association, February 25, 1911.*

The author states that 300 esophageal cases have come under observation during the past four years in St. Mary's Hospital, Rochester, Minn., and have been studied not only with a view to the establishment of a correct diagnosis and productive therapeutics for the individual case, but also with the idea of determining the relative value of the clinical and technical findings.

The clinical examination is of the utmost importance not only for its intrinsic value, but as a guide to the succeeding technical procedures. The more important features to be determined in esophageal disease by the technical methods of examination are the existence, size and relations of pockets, dilatations and strictures, and the character of the esophageal wall, notably at the seat of narrowing.

The technical methods which have proved of especial value may be grouped under three heads, namely: roentgenography, esophagoscopy and the various methods of sounding.

Roentgenography discloses thoracic masses obstructing the esophagus by pressure from without and occasionally a good shadow may be obtained of an esophageal tumor. Its chief service is that of revealing the position, shape, size and relations of diverticula and dilatations when filled with bismuth mixtures. Diverticula as a rule give shadows which are

characteristic. The large dilatations which occur in the upper third of the esophagus above organic structures can be distinguished from diverticula by a tail-like portion of bismuth extending downward from the bottom of the sac. However, this may be absent. Passing a small sound on a thread quickly differentiates the two conditions. Most striking are the large, irregular spindle-like shadows obtained in cases of diffuse dilatation of the esophagus following spasmodic and, infrequently, organic stricture at the cardia.

In cases of cardiospasm the lower extremity of the shadow is cone-shaped and its apex corresponds to the hiatus esophagi, while in cases of organic structure the outline is irregular and terminates above the hiatus. In most instances the dilatation extends to the upper border of the manubrium and is constricted at the root of the lung. The dilatations occurring above organic strictures are, as a rule, of limited extent and in their lower portion irregular in outline.

Safety should be the keynote in esophageal technic. This is to be obtained by a clear conception of the way in which the force is being expended when introducing an esophageal instrument. The force is dissipated either in overcoming the friction of the staff on the wall of the passage, or at the tip of the instrument. Obstruction at the tip is due to pocketing or actual narrowing of the lumen in the canal. Safety resolves itself into the recognition of pockets and avoidance of undue pressure on an instrument which is pocketed.

The tip of an esophageal instrument must be constantly under the guidance of vision or must follow a guide in such a way as to make perforation of the esophageal wall impossible.

In cases of diffuse dilatation following cardiospasm it is frequently impossible to pass an unguided sound through the cardia with a degree of force that is safe (thirty out of sixty-five cases which have come under the author's observation), while a 15 mm. olive but rarely meets marked obstruction when passed on a thread. Decided obstruction of yielding character, followed by slight hemorrhage, is usually encountered when passing a carcinomatous cardia, while in benign cicatricial stenosis the smallest sizes of olive encounter an unyielding esophageal wall.

Leaving foreign body cases out of consideration, the most essential service of esophagoscopy is that of revealing the character of the esophageal wall. It is a relatively safe procedure in the hands of one who has acquired good technic. Safety lies in a clear conception of the way in which the force is being expended when introducing the instrument. Friction on the walls of the passage is an important element, as it makes advancement of the instrument jerky and obscures any fine sense of resistance at the tip of the instrument.

The author uses Brunning's modification of Killian's esophagoscope.

In esophagoscopic work one of the chief drawbacks is the constriction of the esophagus above that portion of the esophageal wall essential to our knowledge. In about 35 per cent of the cases of carcinoma, for instance, the mucous membrane is intact at the lowest point in the esophagus which can be brought under inspection.

Bronchoscopy for Foreign Bodies with Remarks Concerning Bronchial Asthma.

SCHRÖTTER. *Wiener medicinische Wochenschrift*, Nos. 3 and 4, 1911.

The writer reports the interesting case of the aspiration of a tooth plate, containing one tooth and with the following dimensions, 13 mm. long, 11 mm. wide. Height of the tooth, 10.4 mm.; greatest width, 7.4 mm.

The extraction of the foreign body, which was accomplished under cocaine anaesthesia with the patient in the sitting position, was unusually difficult.

The tooth was in the left bronchus and with a bronchoscope 30 cm. long it was only possible to get within $\frac{1}{2}$ cm. of the foreign body.

The operation, lasting 18 minutes, was not followed by any reaction.

The left-sided broncho-pneumonia promptly cleared up, so that the patient could leave the hospital within a few days.

The writer emphasizes the point that an X-Ray plate does not always show whether the foreign body is in the right or left lung.

It is important to get the radiograph during inspiration and a forced cessation of respiration.

Another point brought out in the writer's paper is the negative findings with percussion and auscultation. This is caused by the well marked bronchitis, usually bilateral, caused by the presence of the foreign body. The dyspnoea is not entirely caused by a shutting off of a portion of the lung, but is also the result of the changes in the bronchial tubes. The author believes that an aspirated foreign body causes reflexly by irritation of vagus branches, an increased innervation and tone of the bronchial musculature accompanied by symptoms of a capillary bronchitis. This irritation of the bronchial musculature after aspiration of a foreign body may persist for a long time and may cause a sensitiveness of the mucosa of both lungs, a spastic condition persisting for months. The writer has before mentioned the good results following bronchoscopy in cases of bronchial asthma by the use of cocaine, or cocaine adrenalin. Nowotny and Galbsky have made similar observations. Ephraim's observations of the treatment of bronchial asthma by local applications of cocaine or similarly acting substances are also quoted.

His results show that by this method of treatment attacks of bronchial asthma are not only directly benefited but may remain away for a long period of time.

The Results of the Local Treatment of Chronic Inflammatory Diseases of the Bronchial Tubes. (Grundlagen und Ergebnisse der Lokalen Behandlung Chronisch-Entzündlicher Bronchialerkrankungen.)

EPHRAIM. *Deutsche Medizinische Wochenschrift*, November 9, 1911.

The former methods of treatment in chronic affections of the bronchial tubes, fail in the majority of the cases. Inhalations of finely vaporized fluids are absolutely useless. Bronchoscopic examinations as well as animal experimentations show, that even in the favorable cases the par-

ticles of the fluid used that reach the bronchial mucous membrane, are so small in amount that the therapeutic action is practically nil.

The author has experimented on dogs and squirrels, by carrying an atomizer into the main bronchus and spraying in a coloring fluid and then immediately taking out the lungs, in order to prevent a diffusion of the fluid, and has found large parts of the lungs colored. Microscopical examination showed, that in these regions, not only the walls of even the smallest bronchi, but also the walls of the alveoli were colored.

The author's investigations in animals show that through these endo-bronchial injections, the fluid can be carried into the smallest bronchi.

Technique in patients.—The fluid to be used in cases of bronchial catarrh may be injected through a bronchoscope, but the author uses a method which is much more agreeable to the patient than the introduction of the bronchoscope. After anaesthetizing the glottis by a spray or application and the trachea by using a properly curved vaporizer, a canula attached to a flexible vaporizer can be carried directly into the right or left bronchus. In order to inject the medicated fluid over as far an area as possible, the instrument is slowly raised and lowered while the injection is being made.

Therapeutic results.—The author has treated one hundred and sixty-one patients endo-bronchially, that before had been treated without result in the usual way. Twenty-two were suffering from a chronic or sub-chronic catarrhal bronchitis. In eighteen of these cases after a single endo-bronchial injection, the improvement was so decided that further treatment for the complete relief was unnecessary. The injected fluid which is finely vaporized, was usually 5-7 ccm. for each bronchus. The author usually used novocain 2.0, suprarenin solution (1-1000) 10.0, physiological salt solution ad 100.0. In cases with very profuse secretion the author has used with good results a 1-6% silver nitrate solution. In two cases of long standing purulent bronchitis with a few injections of 5-10% turpentine emulsion to which was added some suprarenin, the author was able to completely check the secretion.

The majority of the author's observations were in cases of bronchial asthma. He has treated one hundred and thirty-three asthmatic patients, endo-bronchially. The following interesting observations were made: The endo-bronchial injection of suprarenin mixed with novocain, invariably relieved the asthmatic paroxysms in a few minutes; patient's breathing becomes easy and the wheezing and whistling disappears.

The method, as to whether the injection is made through a bronchoscope or with the curved spray apparatus, does not make any difference. The complete relief from the asthmatic attacks in the majority of the patients lasts a long time, that is, weeks, months or even over a year. In other cases, but much less frequently, the symptoms return after a shorter interval, but usually disappear again for a long time after one or more treatments.

Out of the one hundred and thirty-three asthmatics, there were thirteen in whom the asthmatic attacks only came on every few months and lasting only a few days. In this periodic form of asthma, the result of the treatment is not as good, but even in this form, out of ten patients

who had been kept under observation, three remained entirely free from attacks. In six other cases of well marked neurasthenic asthma, in only two was a lasting result obtained.

The most favorable cases for treatment were the cases of true bronchial asthma, accompanied by chronic bronchitis and emphyzema, with almost daily paroxysms. Of one hundred and three cases of this kind treated endo-bronchially, and in whom other methods of treatment had been absolutely of no avail, eighty-eight could be kept under observation. Seventy-two the result of the treatment was very satisfactory, and forty-eight of these did not have any recurrences.

Conclusion.—The author's experience with this method of treatment shows, without a doubt, that endo-bronchial injections furnish a method which is not only not harmful, but in many otherwise incurable cases, is of the greatest benefit.

Labyrinthitis. (Labyrinthitis.)

URBANTSCHITZ. *Wiener Medicinische Wochenschrift*, No. 41, 1911.

The author states that from a prognostic, therapeutic and differential diagnostic standpoint, it is of the greatest importance to distinguish the serous forms of inflammation of the labyrinth from the purulent.

In the Vienna clinic a labyrinth operation is only permitted when the function of the cochlear and vestibular apparatus has been destroyed.

A case reported by Ruttin demonstrates the importance of this. Five days after a radical mastoid operation had been performed, labyrinth symptoms, fever, complete deafness, and a severe spontaneous nystagmus developed. The function of the vestibular apparatus, as shown by the caloric test, had not, however, completely disappeared. This one indication induced Ruttin to put off the labyrinth operation and the subsequent history of the case proved that he was right, because while the deafness persisted, the vestibular reaction returned and remained normal.

The same author in another article mentions the importance, when a labyrinth suppuration has been diagnosed, of operating immediately, at the same time the radical mastoid operation is performed and not waiting to see what the result of the mastoid operation is going to be. If this procedure is not followed, a rapidly developing meningitis may render the operation hopeless.

Circumscribed inflammations of the labyrinth do not *per se* indicate any special surgical interference. There are many cases in which the wall which separates the middle ear from the labyrinth has been partly destroyed by a labyrinth suppuration. In such cases, a labyrinth fistula exists and many of these get well after the middle ear cavities are opened up. It is remarkable that a labyrinth fistula may go along without any symptoms.

It was formerly believed that when a suppuration of part of the labyrinth existed, the other parts of this organ must also be involved, but Herzog has lately been able to demonstrate that a true circumscribed, purulent labyrinthitis, could exist. Purulent inflammations of the labyrinth occasionally get well spontaneously.

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ALBANY MEDICAL ANNALS

Journal of the Alumni Association of the
Albany Medical College

JANUARY, 1912



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A. VANDER VEER, M. D. W. G. TUCKER, M. D. ANDREW MACFARLANE, M. D.
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